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THE DENTAL DIGEST

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No. 4

An Educational Effort and What Came of It

George Wood Clapp, D.D.S., New York, N. Y.

In 1907 Dr. J. Leon Williams addressed to the dental profession an appeal for concerted action to secure improved forms of artificial teeth. The writer was then engaged in research work for The Dentists' Supply Company and had just completed the method of selecting teeth by which the required sizes are obtained by measurements in millimeters on the bite rims and the size of teeth selected from tables of tooth dimensions in millimeters. Experience covering some years of effort to make successful and pleasing dentures for patients had made him sadly familiar with the shortcomings of the artificial teeth then obtainable, and caused him to be deeply interested in Dr. Williams's appeal. Dr. Williams had not mentioned any particular class of teeth, but the writer was especially interested in improving the forms of the bicuspid and molars, where his efforts to secure articulation, efficiency and stability of dentures had met with practically complete failure.

After much study, it dawned upon the writer that if the cusps of the maxillary bicuspid and molars were carved in such way as to conform to the basic curve of the occlusal surface of the mandibular wax trial rim, as Dr. Prothero had taught him to carve it, and proper mandibular bicuspid and molars were opposed to them, efficiency, articulation and stability of dentures should be easily secured. With the assistance of Dr. E. S. Ulsaver, teeth in situ in skulls in museums were studied and the curves represented by the tips of the maxillary cusps found to be surprisingly like the curves which Dr. Prothero carved. In 1909, The Dentists' Supply Company introduced Twentieth Century anatomical bicuspid and molars which were carved on this principle.

In 1910 the writer produced a book entitled "The Mechanical Side of Anatomical Articulation," which assembled into a system the teachings of Walker, Christiansen, Bonwill, Snow, Prothero, and others. It described the use of the face bow, the registration of the path of the condyles in protrusive movements, the adjustment of the articulator to reproduce that path and the articulation of the teeth to secure greater stability of dentures and more ease and efficiency in mastication. The writer also gave many table clinics on these methods.

The book was given away as a premium with a subscription to THE DENTAL DIGEST, and in this way a much wider circulation was ob-

tained than would otherwise have been the case, because this period records about the low-water mark in professional interest and skill in denture making.

Just about this time, the profession began to be enlightened as to the disasters which might result from conserving every abscessed tooth and from placing bridges on diseased abutments. It began to be perceived that bridges were not indicated for every gap in the tooth row, and that full or partial dentures were indicated for many cases.



First Gysi Class, August 1913

*Drs D.A. Zurbrigg W.E. Cummer W.H. Thompson D.D. Campbell F.P. Moore M.A. Schwartz
G.W. Clapp Prof. Gysi G.H. Wilson*

Led by the hope for better results and driven by the necessity of making dentures for many cases where they had formerly made bridges, a number of men in the profession applied the suggested technic with such favorable results as to cause the hope to spring anew in their breasts that dentures might sometime be satisfactory. Almost immediately letters began to come to the effect that the technic was beneficial, but that dentists were unable to learn it from the book or clinics in such way as to derive the maximum benefits. Many of the letters asked where practitioners could study such a technic under supervision. So

far as the writer knew, no dental educational institution was offering such instruction. A number of the men stated rather forcefully that the need was so great that there ought to be a place where such instruction could be had in a condensed and practical form suitable to the experienced practitioner, and they asked whether The Dentists' Supply Company would not provide such facilities until the dental educational institutions were ready to offer them.

The writer's time was then occupied in research and editorial work, but, influenced by these suggestions, a chair was placed in his office and instruction was offered, free of charge, to dentists who cared to come to the office for it. Dentists began to come, one at a time until, before long, it was necessary to take on an assistant for the purpose of giving instruction. The instruction was confined to the use of the face bow, the carving of the occlusal surfaces of the bite-rims and the arrangement of the improved forms of teeth for articulation.

In 1910 the Dental Cosmos published Dr. Gysi's epoch-making articles on "The Problem of Articulation," suggesting greatly improved methods of recording mandibular movements. A little later Dr. Gysi offered the Gysi Adaptable Articulator, by the use of which the methods could be applied to the construction of dentures.

The evidently scientific character of this presentation fanned the little flame of interest in scientific denture construction, and it was thought that if Dr. Gysi could be gotten to come to America to teach personally men who were sufficiently interested, the benefits would be countrywide. The Dentists' Supply Company agreed to guarantee the expense of bringing Dr. Gysi to this country to give such instruction.

Dr. Gysi came to America in 1913 and, through the courtesy of the College of Dental and Oral Surgery in the City of New York, gave two courses in its new building. Dentists came from widely separated parts of the country as members of these classes, and some of these men are today leaders in denture work.

A list of the names, which may not be complete, is as follows:

- Dr. W. K. Bradfield, St. Petersburg, Fla.
- Dr. D. D. Campbell, Kansas City, Mo.
- Dr. G. W. Clapp, New York City.
- Dr. W. E. Cummer, Toronto, Ontario.
- Dr. C. J. R. Engstrom, Los Angeles, Calif.
- Dr. F. J. Fifield, Minneapolis, Minn.
- Dr. F. W. Hergert, Seattle, Wash.
- Dr. F. P. Moore, Hamilton, Ontario.
- Dr. H. A. Palmer, Greenville, Va.
- Dr. W. Randall, Louisville, Ky.
- Dr. W. H. Richards, Knoxville, Tenn.
- Dr. J. P. Ruyl, New York City.

Dr. M. A. Schwartz, New York City.
Dr. C. J. Stansbery, Seattle, Wash.
Dr. R. W. Tench, Franklinville, N. Y.
Dr. B. F. Thielen, Paris, Texas.
Dr. W. H. Thompson, Cranbrook, B. C.
Dr. H. C. Werts, Beaver Falls, Pa.
Dr. W. T. Willard, West Toronto, Ont.
Dr. G. H. Wilson, Cleveland, Ohio.
Dr. D. A. Zurbrigg, Philadelphia, Pa.

It is interesting to note, in view of the fees which have since then been charged for denture instruction, that not enough dentists could be interested in these classes to defray the expenses and a deficit of \$1300 resulted. In other words, in that day, courses in articulation by the greatest authority upon the subject could not be sold to the profession at cost. In addition to the technic taught by Dr. Gysi, Mr. Supplee taught each class the principles of impression-taking by the Greene-Supplee method.

Among the dentists who assembled at New York for the purpose of taking instruction under Professor Gysi was Dr. Russell Wilford Tench, who was graduated some years before at Buffalo, New York, and had been practising in New York State since that time. Immediately following the close of the classes, Dr. Tench became associated with the Research Division of The Dentists' Supply Company, for the purpose of continuing the instruction which had been going forward in the writer's office and of improving it by applying what Professor Gysi had taught us.

When the members of the Gysi classes returned to their homes and had perfected themselves in the new technic, they gave clinics and papers upon different phases of the subject, and some of them taught classes of their fellow practitioners. The demands upon the Research Division for instruction increased to such an extent that the single chair became quite insufficient. Some of these dentists desired to come from long distances, and it became imperative that if they were to be properly assisted, the instruction should include impression- and bite-taking, because it became increasingly evident that the most carefully made dentures might be quite valueless to the patient if the impression or bite was carelessly or imperfectly taken.

A space sufficient to accommodate four dental chairs and the necessary work benches was, therefore, set aside in the Research Division, and Dr. Tench devoted himself intelligently and enthusiastically to the arrangement of the course and the instruction of dentists who desired to attend. Under these conditions he was able to make improvements in the application of the principles taught, not only by the older workers, but by Greene, Supplee and Gysi. Some of these improvements



1. W. T. Willard, 2. R. W. Tench, 3. C. J. R. Engstrom, 4. W. H. Richards, 5. B. F. Thielen, 6. C. J. Stansbury,
7. W. Randall, 8. F. W. Hergert, 9. H. C. Werts, 10. G. W. Clapp, 11. Prof. Gysi, 12. S. G. Supplee, 13. W. K. Bradfield.

have proved to be so important that they have become standard technic with the most advanced workers.

After a time the four chairs became insufficient for the accommodation of dentists who desired instruction. The Research Division extended its space, and fine quarters were equipped in the most approved manner. Eight chairs were provided and additional teachers were developed, so that there were three teachers to supervise the work of eight dentists. This insured nearly continuous personal attention to each practitioner during the two weeks required for him to receive preliminary training and to apply the principles by making a practical case for an edentulous patient.

In the summer of 1919 notice was served upon The Dentists' Supply Company that, under the dental law which had recently become effective in the State of New York, instruction of the sort being given could legally be imparted to dentists not registered in the State of New York only by a regularly chartered dental institution. When the writer saw Dr. Augustus S. Downing, Deputy Commissioner of Education for the State of New York, to present the merits of the work, Dr. Downing said:

"Dr. Clapp, you don't have to sell me on what you are doing down there in New York. I know more about it than you do."

It was rather natural to smile at that, because I had originated the scheme, had supervised its development and I thought that I knew quite a good deal about it.

He said, "Have you ever worn artificial teeth?"

I replied that I was happy in the fact that I never had, because I thought sound natural teeth to be much better than the best plate that anybody would ever make.

"Well," said he, "I have worn artificial dentures for a number of years and the first satisfactory set I have ever had is a set made for me by a dentist here in Albany whom I sent down to New York to 'spy out the land,' that is, to find out what you were doing. The plates are entirely satisfactory, and I recognize that the work is a benefit to the profession, to the people who are patients in the school and to humanity in general. I recognize that it is not a profit-making enterprise and that no fees are charged to patients. I should like to see it incorporated into the dental educational system of the State of New York."

Dr. Downing made strong efforts to have the work incorporated into the dental educational system of New York by affiliation with one of the dental schools of the State.

The Dentists' Supply Company authorized the writer to make, on its behalf, an offer to three of these schools, of which the following is the substance:

If the school did not have in its own institution suitable quarters

and equipment, quarters might be rented and satisfactory equipment installed; the personnel of the staff would be kept on a high plane, the standard of instruction would be maintained, the fees would be kept as moderate as possible; the Company would make no commercial capital of its services in maintaining the school, but would be glad to use its resources in extending the fame of the school and in facilitating the development of a satisfactory student body; and as the salaries of the teachers in the Research Division were much higher than dental colleges were paying, and an annual deficit was almost unavoidable, the Company would meet these deficits. The only reasons for insisting upon the writer's direction were that the writer had originated the idea, had supervised it from the beginning and the Company wished to know who would originate the expenditures it obligated itself, in advance, to pay. In other words, it could not sign a blank check without knowing who was to fill in the amount.

No dental college felt itself able to sustain the stigma which would attend such a connection with a commercial institution, and all were compelled to decline the offer. From that date forward, dentists not licensed to practise in New York State could not be admitted to the Research Division for instruction in impression- and bite-taking.

It is interesting to note what had been accomplished up to this time and conditions under which the work had grown. There had not been a word of advertising printed about the instruction and nothing had been written except in reply to inquiries addressed by dentists. Information about the work must have passed from mouth to mouth among members of the profession and must have been generally commendatory. Dentists came literally "from the uttermost parts of the earth," often at no small expense of time and money. At the time when the ban was placed upon students not registered in this State, dentists had been admitted from Maine, Massachusetts, Rhode Island, Connecticut, New York City and State, New Jersey, Pennsylvania, Maryland, Virginia, the Carolinas, Florida, Alabama, Louisiana, Texas, Kentucky, Ohio, Indiana, Illinois, Michigan, Iowa, Nebraska, Kansas, Minnesota, Washington, Oregon, Utah, California, Canada, Australia, New Zealand, China and England.

At that time applications were on file from one hundred and sixty-eight dentists awaiting admission from Alabama, Arizona, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, North Dakota, South Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wyoming, Canada.

(To be continued)

A Picture History of Dentistry

By H. H. Manchester, New York, N. Y.

1600-1650—THE DENTIST BECOMES A SUBJECT OF ART

One of the best evidences of the gradual rise of the dentist at the beginning of the 17th Century is the way in which he impressed the imagination of really important painters of the period, and led them to make him a subject of their art.

This was no doubt due to the circumstances of the time. Dentistry was a comparatively new profession, or rather, at that time, craft, which was just becoming independent of other trades. The dentist's work in itself was full of action, which suited the requirements of



The Dentist, by Gerard Van Honthorst, about 1625. A popular demonstration.

some artist. It was frequently done on an open platform or in an open window which brought it to the attention of the artist, and added to its picturesqueness. At all events it was seized upon by the genre painters of the period, and depicted in various paintings from several different viewpoints.

A premonition of this tendency was shown in a few woodcuts of dentistry, as well as in a copper plate by Van Vliet, reproduced in previous articles, but in the 17th Century even the painters began to utilize it as a subject.

One of the first, and certainly one of the most striking of all these paintings, is by Gerard Van Honthorst. This portrays what is probably a public demonstration of tooth pulling by a dentist. One of the spectators is holding a hand of the patient, while the others are looking on in open wonder.

The operation was apparently taking place at night, at least the dentist's assistant at the right is holding a candle so as to throw a light into the mouth.

This assistant is a youth or young man, and was probably an apprentice learning the craft. His costume with the sash and tassels at the side, as well as the dentist's as far as can be seen, were no doubt part of the advertising used to impress the public.

In the background may be seen several varieties of dental instruments, as well as a few flasks of medicine.



The Dentist, by Van Ostade. A caricature of a peasant toothpuller and his patients. First half 17th Century.

The artist, Gerard Van Honthorst, was born at Utrecht, in 1590. He spent several years in Rome where he was patronized by the Marchese Guistiniane. As he painted many night scenes he was sometimes called *Dalle Notte*.

In 1619 he worked for King Frederick, and in 1628 for Charles I. in England. One dental picture by him was produced in 1622, which is probably not far from the date of the one we are reproducing.

A painting by Van Ostade illustrates the shop of what might be called a country tooth puller, together with a number of his peasant patients. The arrangements of the room are of the crudest sort, and

make it evident that the dentist was a humble craftsman, rather than one of the showy charlatans that travelled from place to place, or was already learning to advertise in the large cities.

A number of forceps may be seen on the wall, and there is a wash basin at the left, but beyond this the office equipment is notable for its absence. The chair on which the patient is sitting is the ordinary straight legged one of the peasant home, as is also the table on which he is leaning his arm.

The painter, Adrian Van Ostade was born in Harlem in 1610. He was first a pupil of Franz Hals, and later came under the influence



The Dentist, by David Teniers the younger, about 1645. He is showing the tooth to spectators probably outside the window.

of Rembrandt. He was especially a genre painter, and touched upon many of the subjects of everyday life.

The painting entitled "The Dentist," by David Teniers the younger, is perhaps a portrait. It represents a dentist holding up a tooth, which he has just extracted, to the view of the spectators. He is probably standing in his window, while the spectators are outside.

In front of him is most likely the window sill on which are several dental instruments, as well as jars and flasks of medicine. At the right

is a skull which was used to show the location of the teeth, and in the background dimly outlined is the patient holding his jaw with one hand.

The artist Teniers was born in Antwerp, in 1610, and developed under the influence of Rubens and Brouwer. He was the court painter to the Archduke Leopold Wilhelm, governor of the Netherlands, and received commissions from Philip IV. of Spain and Queen Christina of Sweden. He was considered perhaps the greatest of the Flemish genre painters.

A painting which represents some improvement in the office of the dentist is by Gerard Dou, about 1650. The work was being done



The Dentist, by Gerard Dou, about 1650. This shows a professional interior, with chair at the window, so outsiders could see.

in the window where the light was good, and, incidentally, it could be followed by the spectators. The furniture, however, shows signs of prosperity. There are folds of a curtain over the window, and a potted plant on the sill to add a touch of beauty. In the background is hung up a stuffed crocodile as a symbol of the art, while various dental instruments may be discerned on the shelf.

The painter Gerard Dou was born in Leyden in 1613. After an apprenticeship to a glass painter, he entered Rembrandt's studio in

1628, where he remained three years. His tendency, however, was for infinite detail, almost opposite to the free energetic treatment of Rembrandt, but he absorbed much of his knowledge of shadows and depth of color from the master.

The dentist was a favorite subject of his, and he produced at least three different paintings very much like the one at hand, besides a later and different one on the subject. All of these pictures, it may



Dentist and boy, by Gerard Dou, 1672.

be noted, show the interior of a professional office that is no doubt permanently located, and are thus evidences of the growth of dentistry as a profession.

On the other hand, it must not be thought that the science of dentistry had as yet outgrown the crude traditional remedies of the Middle Ages. This is illustrated by some which appear in a medical book

entitled "*Natura Exenterata*," or "Nature Unbowelled," published in 1665. Here is one for the toothache which acted through the ear:

"For the Tooth-ache.—Take the juice of green Burrage, and poure it into the eare of that side the pain is, and lye on the other side, that it may continue in the ear some time, and it will give perfect ease."

"For a Tooth that is rotten and aketh.—Take an ordinary earth worm, and dry it into a powder; take of that powder, and put it into the Tooth when you go to bed, and put wax upon the Tooth to keep it in, and by morning the corrupt part of the Tooth will waste away, and the good will remain."

Several prescriptions for making a tooth fall out without pain are given in the work, of which the following is an example:

"To make a Tooth fall out without paine.—Put in the hollow tooth ashes of wormes, or of Mousedung, or of a Buck's tooth, or put in the juice of great Celendine, or the brain of a Patridg, and annoint the tooth on the outside; or the powder of red corral put into the hollow, wil make it fal out."

On the other hand, to cleanse and fasten the teeth in more firmly, all that was needed was the following:

"To cleanse (and fasten) the Teeth.—Seethe the roots of vervaine in old wine, and wash your teeth therewith, and it will cleanse them and fasten them."

When April Comes

March may be somber and gray clad and drear,
 March may be shaped of a sob and a tear,
 March may be sullen, not given to laughter—
 Oh, March may be weary—but April comes after!

Winter's last flourish, the end of his power,
 Ice for a moment and sleet for an hour,
 Frost, and the threat of dark clouds overhead—
 But April is now here to reign in his stead!

March is a venomous, angry old age,
 Writing a will on a torn, blotted page,
 Frowning at youth, and at youth's heedless laughter—
 But April is springtime, and April comes after!

—N. Y. Sun.

Orthodontic Engineering*

By Lionel Hartley, D.D.S., New York City

Since the publication of the first article of this series it has developed that the table with the hole described in the January issue, together with the levelling device and the means for bringing a point down on a model and recording elevations, are covered by Letters Patent granted to Dr. Frederick Lester Stanton in 1917; and that the Centres of Area shown as Figure 9, page 83, February issue, were presented before the New York Society of Orthodontists, by Dr. Stanton in February, 1922, and illustrated and described in *The International Journal of Orthodontia, Oral Surgery and Radiology*, in April, 1922.

Observation which has extended over some years has convinced the writer that orthodontic engineering had its inception in Dr. Stanton's office and that its present development is due in large part to his continuous study and efforts.—EDITOR.

THE VERTICAL PROJECTION

The horizontal projection just explained, is the only one necessary for the majority of cases that present themselves in ordinary practice,

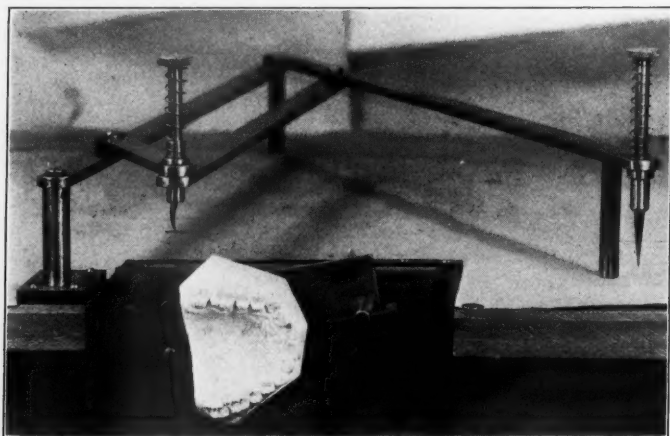


Fig. 25.

but when we come to the so-called "open bite" cases (Figs. 26, 27, 28, 29), it is necessary, in addition, to survey the models in a vertical position and make drawings of the Vertical Projection and design a new line of occlusion and the compensating curve.

The upper model is secured in the levelling table in the same manner as for the horizontal projection, by means of the three screws. The levelling table is now slid into the vertical grooves in the drawing board (Fig. 25).

* Copyright 1923 by Lionel Hartley, D.D.S.

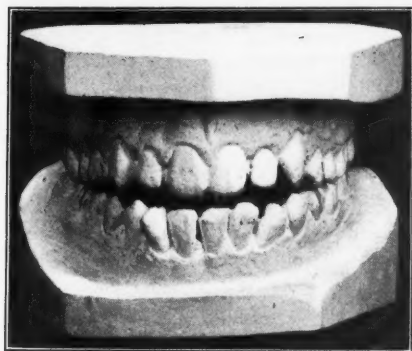


Fig. 26—Front View.



Fig. 27—Right Side.



Fig. 28—Left Side.



Fig. 29—Occlusal View.

Starting at one end (preferably our left), we project the following points of each tooth:

1. The buccal or labial aspects,
2. The cusps,
3. The grooves,

being careful to have each tooth in succession with its buccal aspect parallel to the drawing board; this is accomplished by means of the sliding pivot (A Fig. 33) and the nut (B). Each tooth is brought in its proper relation to its neighbor and so projected on the drawing board.

Having projected all the points of interest on the upper model, we next place the lower model in occlusion with the upper (Fig. 33), and project two points on *each* of the level lines at the base of the models (C C and D D Fig. 33).

On the drawing paper, a line is drawn through C C and another through D D. This gives us two parallel base lines which are used for registration and for measurement (Fig. 30).

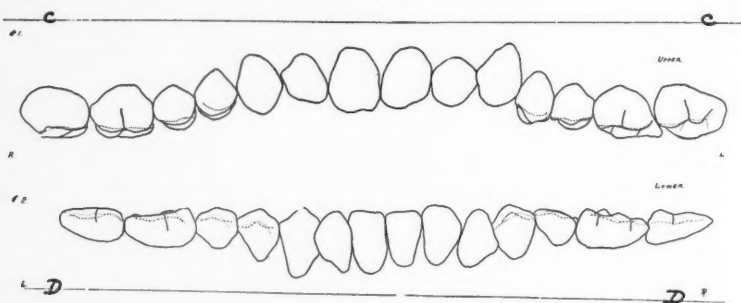


Fig. 30—Upper and Lower Vertical Projections.

The upper model is now removed from the levelling table and the lower is placed in position. (The three set screws on the level line.)

The drawing paper is now turned upside down and fastened to the board in such a manner, that the projected base line will coincide with the base line of the lower model in its new position.

Each tooth is now projected the same as in the upper model but instead of being placed in contact (mesio-distally) is occluded with its upper neighbor.

In order to make this point clear, we must revert to our horizontal drawings. We note that the sum of the mesio-distal diameters of the lower, because the upper jaw is larger than the lower and overhangs it on its entire circumference. When we project the teeth on a straight line, the uppers mesio-distally in contact, owing to the difference in size, we must space the lowers so that the points of occlusion will strike the correct position. In making the vertical projection, we assume the teeth in occlusion horizontally.

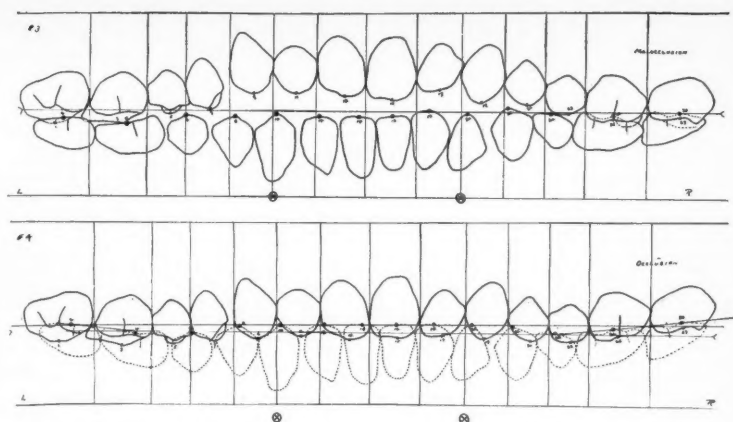


Fig. 31—Vertical Malocclusion (above). Vertical Occlusion (below).

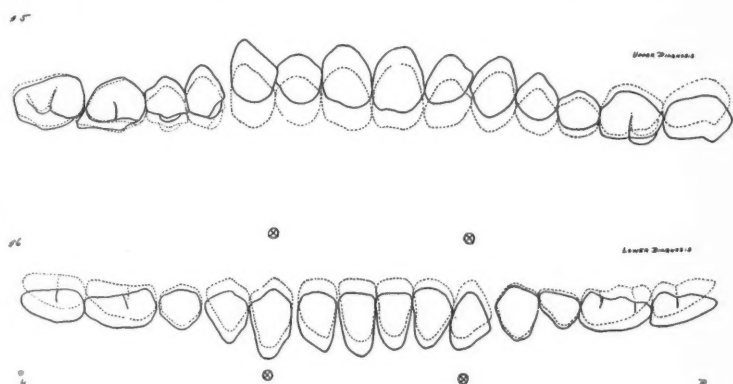


Fig. 32—Upper Diagnosis (above). Lower Diagnosis (below).

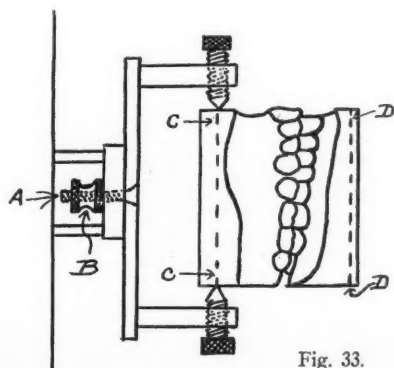


Fig. 33.

Having now made a drawing showing the relative elevations of the teeth of the two jaws as they are (Vertical Malocclusion), our problem now is to move the teeth in a vertical direction until the upper and lower sets are in occlusal contact, guided by the following three points of normal Vertical Occlusion:

1. The average vertical overbite is 2.5 mm.
2. A horizontal plane through the mesio-buccal cusps of the first permanent lower molars bisects the vertical overbite.
3. A horizontal plane through the mesio-buccal cusps of the second permanent lower molars contains the incisal edges of the lower incisors.

DESIGNING THE VERTICAL OCCLUSION

Having completed the drawing of the elevation of the denture, we secure this to the drawing board with the horizontal reference lines parallel to the edge of the board.

Placing a sheet of transparent paper over this drawing, we copy the vertical tangents to all the teeth. These tangents are made by running a T square along the edge of the board. Wherever the arm of the T square touches the side of the tooth tangentially, a line is drawn to the base line; these will necessarily be perpendicular to it, because the base line is parallel to the edge of the board. A horizontal line is now drawn tangent to the incisal edge line of the lower denture at its highest point. Below this at a distance of 1.25 mm. (actual size in drawing is 6.25 mm.) away, another line is drawn parallel to the first. Below the second line at a distance of 1.25 mm. a third line is also drawn parallel to the first.

The first and second horizontal lines are drawn the full length of the paper, the third line occupying the middle third.

Vertical lines are now drawn through the mesio-buccal cusps of the first and second permanent molars.

The intersection of the first of these vertical lines with the second horizontal line and the second vertical line with the first horizontal line on either side, is indicated on the paper. These two intersection points on each side, are on the "Line of Occlusion" of the denture.

That part of the first horizontal line which lies between the distal vertical tangent of the lower laterals, is also on the line of occlusion.

With an adjustable curved ruler we now draw a smooth curve which includes the three portions of the "Line of Occlusion."

We now move the lower teeth (individually) up or down on their vertical tangent lines, until the following points on the lower teeth touch the line of occlusion.

1. The incisal edges of the four incisors.
2. The cusps of the cuspids.
3. The buccal cusps of the bicuspid.
4. The buccal cusps of the molars.

As the elevation of each tooth is brought up to the line of occlusion in the manner described, it is copied on the vertical occlusion sheet.

Having placed the lower teeth in their proper relation to the "Line of Occlusion" we now draw in the upper teeth (tracing each one singly), sliding them up or down on their respective tangents and putting them in the following relations:

1. The occlusal grooves of the upper molars and bicuspid touch the buccal ridges of the respective lower molars and bicuspid.
2. The incisal edges of the upper centrals touch the third horizontal line.
3. The incisal edges of the upper laterals are 1 mm. (5 mm. in the drawing) from the third horizontal line.
4. The cusp of the upper cuspid touches the line joining the cusp of the cuspid with the buccal cusp of the first bicuspid.

Abnormal tilting of any tooth is corrected on this drawing.

On each tooth of the upper jaw, we mark an X at the highest elevation of the cusp. And on the lower jaw we mark X in a circle at the highest elevation of each tooth. This is done first on drawing No. 3 and then traced through on drawing No. 4, so as to have the same spot on each tooth identical on each drawing.

Starting on our left, we mark these points 1, 3, 5, etc., on the uppers and 2, 4, 6, etc., on the lowers, on both drawings Nos. 3 and 4 (Fig. 31).

We now take drawing No. 3 and measure the distance of point No. 1 from either of the base lines, then No. 2, then No. 3, etc. Add all of these distances together and divide the sum by the number of distances measured off; the resulting quotient will be the average distance of all the cusp points from the base line used.

(N. B.—Care must be exercised in measuring the distances that we always use the same base line that we start with. If we start with the upper line we use this for all measurements. If we start with the lower, we continue with it. It is of no consequence whether we use inches or centimeters.)

We mark off two points, the distance from the base line used, each equal to the quotient obtained and connect these points with a line. This line will be parallel to the base lines and represents a plane passing the average distance from each high cusp point.

We next do the same thing on drawing No. 4, after which drawing No. 4 is placed over drawing No. 3, with these two new lines exactly superimposed. Placing a piece of carbon paper between these drawings, we mark two registration points X in a circle.

Our next step is to make the Diagnosis drawings No. 5 and No. 6 (Fig. 32).

Taking a fresh piece of tracing paper, we number it "5 Upper Diagnosis"; placing it on drawing No. 3, we trace through the regis-

tration points and all the upper teeth, in black India ink. We then place this drawing on drawing No. 4, with the registration points superimposed; fasten to the drawing board and copy all the upper teeth in green ink. This drawing shows the movement necessary for each tooth to be put in Vertical Occlusion.

Taking a fresh sheet of tracing paper and numbering same "6 Lower Diagnosis," we repeat the same operation for all the lower teeth.

These two drawings No. 5 and No. 6 are used to design appliances for making the vertical corrections on each jaw, and are marked on drawings No. 7 and No. 8 with yellow ink. Drawing "No. 7 Upper Treatment," and drawing "No. 8 Lower Treatment," are simply tracings respectively of the upper and lower jaw, from drawing No. 3.

We have now finished the surveying and designing of the arches of the teeth in occlusion, both horizontal and vertical.

There are some Orthodontists who think they can get the best results at all times from existing commercial appliances; for these we have finished our task, but for the benefit of those who wish to design their own appliances, we will next go into the principles of Appliance Design, according to Engineering methods.



The Religious Beliefs of a Scientific Man*

By Dr. J. Leon Williams, Fellow of the New York Academy of Science

(Read before the Query Club, New Rochelle, N. Y.)

The religious beliefs of a scientific man rest upon a different foundation and have been reached by somewhat different mental processes from those of the theologian. The scientific man takes nothing for granted. The words and works of all so-called religious authorities must be subjected by him to the same rational examination and criticism as is applied to secular productions. These intellectual processes may be rightfully thought of as a kind of spiritual leaven working more or less everywhere in the minds of men.

And so it has come about that for the last three-quarters of a century the more progressive part of the intellectual world has been passing through the throes of a great effort to readjust its religious beliefs to the wonderful contributions which modern science has been making to our knowledge of man and the universe. While certain previous readjustments of this kind had, from time to time, been found necessary, nothing requiring such a revolutionary change in the foundations of belief had ever occurred as was demanded when the publication of Darwin's "Origin of Species" fell upon the religious world like a great thunderbolt out of the blue. Nearly seven decades have passed since that time, and each one has added something to the difficulty of holding the truths of science and the doctrines of the creeds in the mind at the same time.

This difficulty would never have arisen if men, far back in the past, had not made the profound mistake of supposing that religious thought was not as much the subject of evolution and progress as any other branch of knowledge. In my opinion the time is not far distant when it will be clearly seen that one of the most remarkable things in all human history is the fact that a very primitive people, hardly well emerged from barbarism, were able to impose their religious beliefs, many of which were formulated more than 3500 years ago, on a very large part of the human race right down to the present day.

That there is not the slightest exaggeration in this, as a statement of fact, was fully demonstrated when one of the best known public men in the country, an ex-Secretary of State, recently stood before an audience of more than five thousand people in the City of New York and affirmed his belief in the literal, verbal Divine inspiration of the Hebrew Bible and was tumultuously cheered for that statement by Doctors of Divinity and other so-called educated persons. When we add to this evidence of the strange perversity and ignorance of men

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in high places about the real nature of the more ancient part of our Bible the further historical evidence of the manner in which the simple but lofty religious and ethical teachings of the founder of Christianity have been obscured and perverted to further the ends of priestly and ecclesiastical ambitions for spiritual and material power, we shall have no difficulty in understanding the present tumult and confusion concerning religious ideas.

The so-called conflict between science and religion is a complete misnomer. Science has no quarrel with religion or with sound religious beliefs. On the contrary, my own view is that religious beliefs are one of the greatest stimulants of that scientific use of the imagination, the exercise of which is the immediate antecedent of most great scientific discoveries.

But science is the unwavering and uncompromising enemy of all attempts to becloud the intellect and subjugate the understanding by denying the divine right and privilege of perfect freedom of thought. Furthermore, this freedom of thought in the light of science keeps religious beliefs from straying into the thickets and quagmires of superstition. Ancient religious beliefs have become so deeply imbedded in the very substance of human thought on this subject that when one presents some rational substitute for these worn-out dogmas, one feels it necessary, first of all, to point out the inconsistencies, contradictions and general intellectual unworthiness of that which has, for so long, bound the minds of men in bonds of fear.

On such almost immovable foundations have the centuries fixed these beliefs, so large a place do they occupy, even in the minds of those who do not accept them, that when one attempts to combat the views of atheists or materialists one almost invariably finds their arguments directed, not against one's own propositions but against some phase of medieval dogma or ancient Hebrew myth. In other words, the mind of the atheist or the materialist is so habituated to reacting toward any religious statement as though it were an expression of medieval theology, that it is difficult for him to expel these views from his thinking and to consider the subject quite rationally. Atheism and materialism are the natural, the inevitable reaction, in an age of scientific knowledge, to a theology born in ages of ignorance and indissolubly wedded to creeds which permitted no change or freedom of thought. This theology is largely responsible for all the materialism that we find in the world today.

We have, then, to begin with definitions and to point out the differences between a rational interpretation of terms and the meaning attached to those terms by men who were ignorant or prejudiced, or who had ulterior motives in view. Before we plant a garden we clear the ground of weeds so far as we can.

Our subject is religious beliefs. What is a religious belief? What is religion? The moment we begin to think seriously about this question we see what a gulf lies between the conventional view of the subject and a rational interpretation of it.

The etymology of the word "religion" is doubtful but a great many attempts have been made to define it. I regard Tolstoy's definition as one of the best. It runs thus: "True religion is the establishment by man of such a relation to the Infinite life around him, as, while connecting his life with this Infinitude and directing his conduct, is also in agreement with his reason and with human knowledge." The definition by Jean Réville presents much the same intellectual content but adds a thought of historical importance. He says: "Religion is essentially a principle of life, the feeling of a living relation between the human individual and the power or powers of which the universe is the manifestation. What characterizes each religion is its way of looking upon this relation and its method of applying it." I think we may accept those two definitions as fully adequate to our purpose. The central thought in each is man's relation, directly and through all created nature, with the Infinite. What do we know, what can we know, of this Infinite? That is the greatest question any human being can ask. All of man's religious beliefs center around and take form from his conceptions of the Supreme Being who created the universe and whose indwelling Life perpetually recreates it, for *existence is perpetual creation*.

The ancient thought, a thought still held by very many people, the Deists, that at some time in the past God created a universe, wound it up and set it going, so to say, and since that time has, for the most part, left it to take care of itself, has no place in the religious beliefs of a scientific man. It is not the scientist but the religious reactionary who is trying to get God out of the universe by teaching an inherent antagonism between nature and its Creator. The view of the religious reactionary is that all we know or can know about God, He Himself revealed many centuries ago. The scientific man believes he is learning more about Him every day and that sooner or later a knowledge of Him will fill the earth as the waters fill the seas and that this knowledge of Him is coming, as it always has come, by the illumination of the human understanding.

What then is the scientific man's present conception of the Creator and Soul of the universe and of his relation to the Creator? It is only people who attach little importance to the meaning of words who talk glibly about the Infinite. In claiming that Deity, *per se*, is unknowable, Herbert Spencer and John Fiske, years ago, said the last word on that subject. Human philosophy can go no farther than that statement. God is knowable to the finite mind only so far as He reveals

Himself by assuming those limitations which can alone be apprehended by the finite mind. Therefore, the revealed God is always a limited God, and infinitude can not be predicated of that which is limited. There must, in the very nature of things, be something anthropomorphic about any conception that the human mind can form of God. But the best modern conceptions have far less of this quality of anthropomorphism than is presented in the Old and New Testaments of our Bible.

If God created man in His own image, then God must be, in form, the prototype of man. And, in fact, He is always so represented in the Bible. Although the *thirty-nine articles* say that God is without "body, parts or passions," the Bible, in different places, attributes to Him almost every feature of the human body. He is said to have a *face, eyes, ears, nose, nostrils, mouth, lips, tongue, shoulders*, a mighty *arm*, a right *hand*, a *bosom, loins* and *feet*. He *talks, shouts, and laughs*. (I am glad to know that.) He *works* and is *weary*. Of course, it will be said that these are figurative expressions, oriental modes of speech. Very well. Then what becomes of the doctrine of the verbal inspiration of the Bible? If your literal inspirationist says that God did not literally walk in the garden in the cool of the day, then how can he, with any show of intellectual consistency, criticise my interpretation if I say that, literally speaking, there was no tree of the knowledge of good and evil in the garden, and therefore no forbidden fruit, and no garden, and no fall of man? It is time we made a finish of this playing fast and loose with the meaning of words because it suits the needs of creeds and dogmas to do so.

And so, when the *thirty-nine articles* state that God is a person, but "without body, parts or passions," the statement is not only an offense to reason but a flat contradiction of some of the clearest and most explicit words of the Bible in which God is represented a thousand times as a person with bodily parts.

This is no occasion for entering upon a metaphysical discussion on the immanence and transcendence of the Divine Being. But every intelligent person will accept the proposition that there can be no communal or other relationship between man and an abstract idea, between a finite being and an Absolute Being. As John Fiske very truly and logically says: "We are bound to conceive of the Eternal Reality in terms of the only reality we know, or else refrain from conceiving it under any form whatever." And then, after pointing out that this latter alternative is clearly impossible, he adds: "We might as well try to escape from the air in which we breathe as to expel from consciousness the Power which is manifested throughout what we call the material universe."

Our knowledge of our own consciousness is the most certain knowl-

edge that we possess, and the very necessities of thought compel us to predicate a cosmic consciousness as the intelligent soul of the universe. Dr. Buck, in his profoundly interesting book on this subject, maintains that all of those striking instances recorded in the Bible and in history of great and sudden illumination of human understanding were the result of the individual becoming, for a brief time, *en rapport* with the cosmic consciousness. All of the mystics have written of the unutterable things of which they were conscious in moments of great spiritual exaltation. These experiences, no doubt, represent man's highest spiritual achievement in his consciousness of the Divine. The view of the scientific man is that this Divine or cosmic consciousness is the inmost of every atom, every electron, every form of matter. In the words of Carlyle: "Through every star, through every blade of grass, through every human soul, the glory of a present God still beams." Tennyson has finely expressed the same thought:

"Speak to Him thou for He hears,
And Spirit with Spirit can meet,
Closer is He than breathing,
And nearer than hands and feet."

This relationship of the Creative Consciousness to man is the most intimate and vital relationship of man's being. It is the Life of man's life and the Soul of his soul. It is a relationship so vital and intimate that there is no room for anything to come between, no room for priestcraft, creeds or dogmas. Man's highest, clearest consciousness of God comes not from what books and preachments, ancient or modern, tell him about God, but in moments when he has best succeeded in clearing away those obstructions which shut out the Divine influx. At such times man is not much concerned with philosophical or theological disputations concerning the nature of Deity and the form of Its manifestations. He has realized something of God in his own consciousness, and that is sufficient.

But transcendent experiences of consciousness of the Divine do not come to all of us and not often to anyone. We have our exalted moments, perhaps on a spring morning when the very ground on which we stand seems all aquiver with the vibrations of a new life or when from a hilltop we behold the glories of a sunset with far-flung clouds radiant with the colors of living light. These are largely emotional experiences and are precious as such, but the larger part of the knowledge which most men are able to obtain about God comes from reasoned conclusions concerning what we might with reverence call His everyday manifestations in the visible world. The poets have the true vision. All the best of the Bible is true poetry and all the best of the poetry

refers to God's created work. The oft-quoted lines from Wordsworth express what every sensitive soul has felt a thousand times.

"And I have felt
A Presence that disturbs me with a joy
Of elevated thoughts, a sense sublime
Of something far more subtly interfused,
Whose dwelling is the light of setting suns
And the round ocean, and the living air,
And the blue sky, and, in the mind of man,
A motion and a spirit that impels
All thinking things, all objects of all thoughts
And rolls through all things."

Creative intelligence dwells in every form of matter in the universe. *Existence is perpetual creation.* If the inner life of matter could be withdrawn it would cease to be.

There is, of course, a purely mechanical explanation for every movement of matter which may be expressed in terms of energy transference. But science is slowly but surely coming to see that, over and above all problems of energy conservation and energy transference, there are selective or directive forces which do not involve any expenditure of energy. Infinite intelligence is operative in every atom of matter.

It is a very interesting fact that modern science should be drawing near to the views held by three of the most vigorous and profound thinkers of the early part of the Christian era, and these men were three of the greatest fathers of the Greek Church, Clement of Alexandria, Origen, and Athanasius. "They regarded Deity as immanent in the universe, and eternally operating through natural laws." This reminds one that one of the best of recent popular books on evolution has been written by a bishop of the English Established Church. Verily, the world moves in spite of orthodoxy.

But, to come back to my statement that men must learn of God from His visible manifestations in the universe. Excluding the rankest materialists and atheists, I suppose all people of the Christian world, whether in or out of the Churches would grant that the highest manifestation of the Divine ever seen in the material world was in the person of Jesus the Christ. Renewed interest in the exact nature of this great Personality has been recently aroused by the stand which several liberal, brave and highly educated clergymen have taken, in open defiance of bishop and creed, touching the question of the Immaculate Conception and Virgin Birth. During the somewhat heated and acrimonious controversy which has followed, and which is characteristic

of nearly all theological discussions, certain very plain biblical statements seem to have been quite forgotten.

Both Matthew and Luke trace the genealogy of Jesus through a long line of ancestry to David and Abraham. But this line of descent is not possible unless Joseph was His father, for the line of descent runs not through His mother but through His father. If, as has always been claimed, Jesus is a direct descendant of Abraham and David, then Joseph was His natural father. There is no escaping that conclusion. But aside from this evidence it would seem that the question has been very definitely decided by Peter's statement in Acts II, 29-30.

29—"Men and brethren, let me freely speak unto you of the patriarch David, that he is both dead and buried, and his sepulchre is with us unto this day.

30—"Therefore being a good prophet, and knowing that God had sworn with an oath to him, that of the fruit of his loins, according to the flesh, he would raise up Christ to sit on his throne."

If that statement does not mean that Jesus had descended from David because Joseph was His natural father, "*according to the flesh*," then no meaning whatever can be attached to the words.

The doctrine of the Immaculate Conception probably very largely grew out of the mistranslation of one Greek word. And it is not at all improbable that the mistranslation was intentional and made to meet the views of emphasizing certain features of a creed. I am informed by Greek scholars that the true reading in English of the Greek word which in our Bible has been translated "only begotten," should be "unique," or, "the only one of its kind." Dr. Grant asks what the Immaculate Conception has to do with Christianity. Well, it evidently has very much to do with the creeds of the Christian Churches. The emphasis placed upon it by many of the early writers undoubtedly grew out of the feeling that, inasmuch as a miraculous birth had been attributed to many of the pagan gods born of natural mothers, a Christian God must be brought into the world in an equally distinguished and unusual manner. It is only the wise who see the Divine in the usual, the commonplace; the ignorant must always have a miracle to arouse their interest and command their wonder. And yet, in its wonder and its mystery the natural birth of a human being is the most miraculous and the most divine thing God has done in His created universe. And the wickedest and most despicable of all the wicked and despicable things that religious fanaticism has done is to attribute essential sinfulness to the greatest thing God has ever done in this natural world. The creation of a human being is the greatest thing in the world because a human being is the only creature who can have sufficient knowledge and understanding of the Creator to cooperate with Him in the further evolution of his work and purposes. To

attribute a miraculous or unusual method of conception and birth to Jesus is to belittle Him and His work and to dishonor God. The greatness of Jesus was in His humanity, in His natural kinship to all human souls.

What do men mean when they say that Jesus was God? What mental picture do they have in their minds which these words represent? Do they think of the Person who walked up and down in Palestine, who ate and drank and slept and waked as other men did, as the Creator of the universe? Of course, they do not. They simply repeat these words because they have been taught to submit to what they call "religious authority" and because they have not the courage and the intellectual honesty to express their real, true thoughts. How the Church has bedeviled this subject of sex and procreation! It teaches that souls come directly from God. If, then, when He gives a soul and so breathes the breath of life into a child born even though out of wedlock, has not that soul received the divine sanction for its existence?

In this connection consider the circumstances of Jesus's birth. According to the account which the Church professes to believe, Mary was about to give birth to a child of which Joseph was not the father. They applied for shelter at the inn and were told there was no room and so they were forced to take refuge in the stable where Jesus was born. For nearly two thousand years the Christians have held up to execration the indifference and cruelty of the people in that inn. But if a man and a woman to-day were, under similar circumstances, to apply to an inn, kept by Christians, for shelter, would not the chances be about a thousand to one that they would be told "there is no room for you!"

The divinity of Jesus does not in any way depend upon the story of his miraculous birth or upon any of the miracles which have been attributed to him. I have already referred to the Greek word "*monogenetic*," which has been mistranslated as "*the only begotten*," the correct rendering of which is the "unique one." Jesus was unique in His God-consciousness, His consciousness of His union with the Divine, of the Divine in Himself. No man knows the possible extent, the height and depth of that consciousness of the Divine within himself. It hath not yet entered into the heart of man to conceive how near he may come to God or how much of God may be manifested in him. No man may measure, in thought or imagination, the extent of the divinity of Jesus the Christ. But, so long as men attach any definite meaning to words, or have any respect for logical continuity of thought, they will not attempt to hypnotize the mouth into pronouncing the words, "Jesus was God."

Some of the most important and most beautiful words attributed to Jesus are found in His last prayer for His disciples and followers:

"Neither pray I for these alone, but for them also which shall believe on me through their word; that they all may be one; as Thou, Father, art in me, and I in Thee, that they also may be one in us. I in them and Thou in me, that they may be made perfect in one; and that the world may know that Thou hast sent me, and hast loved them, as Thou hast loved me." This was the summing up, the heart of the great truth He came into the world to teach: the fatherhood of God and the brotherhood of man. Before the beauty and grandeur and all-embracing comprehensiveness of this message how the poor sophistries of the creeds shrink and pass into the realm of the utterly insignificant! How can men who have once comprehended the meaning of those words ever repeat the hymn:

"There is a fountain filled with blood
Drawn from Emmanuel's veins,
And sinners plunged beneath that flood
Lose all their guilty stains."

This plan of salvation by death and sacrificial atonement is purely Hebraic. It was grafted with the teaching of Jesus and the early Christians by the creed-makers and creed-mongers who were striving for authority and political power. It is blasphemous and irreligious. The world has had more than enough of this theology of blood and death. It wants a religion of life, a life of healthy, human activity conducted on the basis of the golden rule. That and that only will save the world.

A noted Philadelphia surgeon has recently published a very reverently worded little book under the title "I believe in God and in Evolution." I think a better title for much that Dr. Keen has tried to express in his book would be "The Evolution of the Idea of God." Every human being who has ever lived who has thought about God at all has thought of Him in terms of his own understanding and according to his own power of imaginative creativeness. It is therefore literally true that all men create God in the likeness of their own minds. In illustration of this fact, it will, I am sure, be a very interesting and instructive exercise to trace the evolution of the idea of God from the earliest biblical times down to the present day. Not the least interesting feature of this exercise will be the confirmation of a statement I made at the opening of this paper, namely, that the ancient Hebrews had imposed their very crude and primitive ideas of God and cosmology on a large part of mankind for more than three thousand years.

The Hebrew idea of God as Creator was that He made man from the dust of the ground by fiat instantaneously or in a very short time.

Let us try to think for a moment of the way in which this ancient Hebrew God worked as Creator. There have already been catalogued nearly a million and a half of living creatures and creatures that have lived and there are probably many more which have not yet been discovered. We have to think of ourselves as looking out over a lifeless world when all at once suddenly twice a million and a half of living forms appear ("male and female created He them"), apparently from nowhere. Quite apart from the inherent absurdity of the main proposition we can not approach this ridiculous idea from any angle without immediately coming face to face with some miraculous interference with divine law and order. According to theology there was no cruelty or suffering in the world until the fall of man. What did those huge, carnivorous extinct monsters live on? And why were they created carnivorous, with teeth and a digestive tract suited for animal food alone, if they were not to kill any other creature? And why do we find in early geological formations only very simple, primitive forms of life and more complex or higher forms in later geological formations? These are specimens of a hundred questions which might be asked and which could not be answered by those who believe in the way of working of the ancient Hebrew God. The modern idea of God's activity in creation is that it is by the rational, orderly processes of evolution, that something of the creative life is always present and always creatively at work in every atom and every form of life.

The Hebrew idea of God was that of a being who created the universe some 6000 years ago, in one week, and has spent all of the time since in repenting his efforts. The modern idea of God is that of a being who finds infinite joy in the processes of eternal creation. Mr. Bryan and the Fundamentalists, who believe in the literal, verbal inspiration of the Bible, say that there is no such thing as human evolution and that God created man quite perfect in the beginning. Well, let us see where that pronouncement lands us. We have on the earth, today, a great variety of races, ranging from the white Caucasian with the high forehead and well-developed front brain, to the black Australian savage who resembles a gorilla more than a Caucasian. All authority and all evidence points to the Australian type as the older or the primitive form. The ancient Hebrew writer says that God created man in His own image. Was that image, is that image that of the gorilla-like Australian? Was it like the North American Indian, or the Hindoo, or the little black people in Central Africa? If not, and there has been no progressive or retrograde evolution, how have these widely divergent races come to be on earth? If man was created in one form about 6000 years ago, then here is evidence of a far more rapid evolution than any scientific man ever dreamed of suggesting.

And when we leave the Hebrew ideas of God as Creator and come to examine their views of Him in His relation to men and to compare those views with what we believe today, we shall indeed find striking evidence of the evolution of the conception of a Supreme Being. There is hardly a crime known to the law that has not been directly or indirectly sanctioned by the Hebrew Bible. Murder in some of its worst and most cruel forms, stealing, lying, deceiving, polygamy, slavery and human and animal sacrificing are all recognized as included in Jehovah's way of dealing with His chosen people and their enemies. God is represented as bringing such plagues and famines upon people in punishment as caused them to indulge in the most horrid forms of cannibalism—mothers boiling and eating their own children. One of the first recorded acts of Moses was premeditated murder. Phineas was awarded the covenant of an everlasting priesthood for murder. Jael is blessed above women for killing an exhausted sleeping man by driving a nail into his temple. David, the man after God's own heart, delivered seven innocent men to the Gibeonites who "hanged them in the hill before the Lord." And so one might go on recounting almost numberless instances in which the Hebrew God commanded or acquiesced in dreadful crime. And most of the crimes and immoralities described in the Hebrew Bible have been defended or condoned by eminent Christian teachers and preachers of modern times.

The burning of perfectly innocent women, because some foolish or malignantly disposed person had accused them of being witches was defended and encouraged by many eminent Christians including John Wesley, Sir William Blackstone, Sir Matthew Hale, and Martin Luther, this latter great worthy and founder of Protestantism saying, "I would burn them all"—and all because the inspired word of the Hebrew God had said, "Thou shalt not suffer a witch to live."

According to Dr. Sprenger, those eight words are responsible for the cruel death of nine millions of innocent people. The records of many of these deaths have been preserved. One thousand were burned at Como in one year, nearly three each day in one small town. Five hundred perished at Geneva in three months. The Presbyterians were responsible for the death of four thousand in Scotland. Seven thousand died at Treves and fifty thousand were condemned during the reign of Francis I. For centuries there was hardly a day when the smoke of a burning witch was not polluting the skies of Europe. This is one of the terrible results of the imposition of Jewish theology on the western world which I had in mind when I said that the time was not far distant when this would be regarded as the most astounding fact in human history.

Contrast this Hebrew view of God and morality, which I have been putting before you from the ancient Bible, with the teachings of Jesus

and the beliefs and standards of today and then wonder how men can say there has been no evolution in our ideas of God and religion. As men think in their hearts, so are they. Deep down in the subconscious minds of men dwell the inherited, persistent remains of these ancient sanctions of selfish egotism, cruelty and all manner of unrighteousness.

A week ago today, I had got thus far in the preparation of the notes for this talk when the Sunday morning papers were handed in. In one of them I found the letter of Dr. Henry Emerson Fosdick to Dr. Clarence Edward Macartney of the Arch Street Presbyterian Church of Philadelphia, and Dr. Macartney's reply. I thought Dr. Fosdick's letter a very conservative, orthodox document, far too much so for my unqualified indorsement. He avows belief in the Deity of Jesus. He accepts the doctrine of the atonement of Jesus but he does not think that this involves the theory of substitutionary punishment. He leaves the question of the historicity of the Virgin birth open to further investigation.

Dr. Macartney, in his reply, dwells at considerable length on the doctrine of the Virgin birth. But it is when he comes to the theory of substitutionary punishment that the flood gates of his doctrinal reservoir are thrown wide open. Here are his exact words as reported in the Sunday edition of the *World* for February 18, 1923:

"You say you believe in the atonement but not in the 'substitutionary punishment' theory of it, 'which (you say) was outlawed from every decent penal system on earth long ago.' But, my dear sir, the substitutionary atonement has not been ruled out of the jurisprudence of the Creator and Redeemer of mankind; it has not yet been ruled out of the Old Testament; it has not yet been ruled out of the New Testament, for in both the Old and the New Testaments Christ is presented as the One who literally took my place as a sinner, who was made to sin on my behalf, who drank my cup, who bore my curse, whose death was the propitiation of my sins, whose righteousness covers me so that in the presence of God I stand justified. The only theory of the atonement taught in the Scriptures is the theory of substitution." There, in the year 1923, A.D., you have the raw article of Jewish theology as it was in the year 1000 B.C. This statement by Dr. Macartney represents the Fundamentalists' view. Writing on this very point, in *Scribner's Magazine* for February, Charles Foster Kent, Woolsey Professor of Biblical History and Literature in Yale University, says: "Unfortunately the Fundamentalists fail to perceive the ghastly implications of their primary assumption that every word of Scripture is verbally inspired by God. At once a long list of discarded institutions—slavery, polygamy, the divine right of conquest, and the obligation to slay those holding heretical beliefs—are restored to the seat of authority."

In closing this talk, I think I can not better illustrate the difference between the religious beliefs of those who are wedded to a belief in the literal inspiration of the Bible and those who have learned to think in the exact and logical methods of science, than by referring to another experience which I had last Sunday. Sitting in my room I "listened in" through my radio to a sermon by Dr. Keigwin of the West Side Presbyterian Church of New York. Dr. Keigwin had been speaking disparagingly of what he called the "highbrows," his contextual remarks making it plain that by highbrows he meant all who assume to bring logical, critical methods of thought to bear on the contradictions and inconsistencies of the literalism of the Bible. A few minutes later, Dr. Keigwin took up the subject of a personal God who, he said, was personal by virtue of His power of speech. And he proposed to prove this, he said, by appealing to our reason, our intellect and our knowledge of logic.

Now, this is a typical illustration of a rank inconsistency, not to use a harsher term, that I have long observed as characteristic of many preachers. When they wish to get your intellectual assent to certain propositions, they will appeal to your reason, to your sense of what is logical; but once having obtained your assent to their propositions, they will, in the next breath, decry and denounce the exercise of the reasoning faculties if you attempt to examine the logical basis of the creeds on which their whole system of thinking is based. Protestantism arose as a defense of freedom of thought, especially in relation to the interpretation of the Bible. But the Fundamentalist branch of the Protestant sects of today is far more narrow and dogmatic than the Roman Catholicism from which they seceded.

As a student of science, my own view of the fundamentals of religion may be summed up in these words:

A Great First Cause is an absolutely necessary postulate to all thinking about creation. Of the nature of that First Cause we know nothing except as it reveals Itself in Form. Form implies limitations and it is therefore a dishonest juggling with words to talk about the infinitude of the limited.

The Soul of the universe is Love and Truth and Beauty. More of the spirit of that Love, Truth and Beauty was revealed in the person of Jesus the Christ than in any other created form of which we have any knowledge.

The significance of His life and death was not as a propitiation to a repentant and angry God for human sins. That is a horrid nightmare of theological invention.

He taught men the great fundamental truth that all wickedness is just selfishness and that there can be no true individual or collective happiness until selfishness is conquered. Heaven here or hereafter, is

a state of life from which selfishness is banished. Hell, here or hereafter, is a state of life in which selfishness is regnant and rampant. That is the reason and the only reason why we have so much hell on earth today. We are consumed with selfishness and that egotism which is always a conspicuous manifestation of selfishness. He who is chiefly concerned with saving his life is losing it all the time. The man who is chiefly concerned with saving his soul has not acquired a soul worth saving.

"Prepare to meet thy God" says the theologian, who has got God as much out of the universe as he can, into some far off heaven. The man who has been trained to see clearly and think straight by science is face to face with God every moment. For him God fills all the Universe.

"Behold, I show you Truth! Lower than hell,
Higher than Heaven, outside the utmost stars,
Farther than Brahm doth dwell,
Before beginning and without an end,
As space eternal and as surety sure,
Is fixed a Power divine which moves to good,
Only its laws endure."

You recognize a quotation that is not from the Hebrew Bible. That is from a pagan bible. Never before in the history of mankind have there been so many people hungry for spiritual truth as now, never before so many longing for great spiritual leadership. But the teachers and the leaders do not appear. And while the people hunger and thirst for the living truth the theologians hurl opprobrious epithets at each other over the interpretation of dogmas that are as dead as Tut-ankh-amen.

The ancient Egyptians embalmed their dead bodies. The theologians have embalmed dead dogmas in creeds, and in both cases the natural processes of decay have been defeated. There is more than one merit in the methods of cremation and more than one sphere for its usefulness.

Right alongside the spiritual hunger to which I have referred, and half crowding it out of men's minds, are fast-growing doubts about the realities of spiritual things, about God and a future life. Many of our foremost thinkers, writers and professors in our universities are teaching these things. Not a month passes that literature of this sort does not appear in our leading magazines. I have already quoted from an article in the last issue of *Scribner's*. The February issue of *The Century* has two such articles that should be read by every serious-minded man. Mr. Glen Frank, in his comment on the times, says,

"Mankind is facing a serious moment in its intellectual history." After referring to the writings of Bertrand Russell, George Santayana, Viscount Haldane and Lord Balfour, he quotes Dr. Irwin Edman, of Columbia University, as one of the ablest in his field of thought, as saying: "Man is a mere cosmic accident" "immortality is a sheer illusion" and "there is practically no evidence for the existence of God." Another eminent teacher calls human life "a little luminous meteor in an infinite abyss of nothingness, a rocket fired on a dark night."

What is the man in the street, and more particularly that great mass of humanity who do the hard, manual work of the world, going to do if they once become thoroughly convinced that life in this material world is the only life there is? They constitute a great majority of mankind. If perfectly organized, they can do what they like, and in many places they are already showing what they mean to do. Habit of thought is a tremendously powerful thing, and the habit of thought of the working people of Christian nations has been that, however hard their lot might be here, there is a divine law of compensation which would reward them hereafter. That habit of thought is passing, and my view is that the Church is largely responsible for its passing. If that belief in crass materialism, which today largely dominates the leaders in so-called "Big Business" becomes the belief of all men, then all men will certainly take all that they can get of the good things of this material world. The old conservative leaders in the religious world seem to me to be blind to the situation while they are bickering over the externals, the non-essentials of their beliefs, the world is rushing toward a spiritual catastrophe, toward the abyss of materialism. The only hope of averting this awful catastrophe lies, in my judgment, in the formulating and teaching of new religious beliefs in harmony with all new facts and discoveries in the fields of science.

Nothing can permanently endure that is not in harmony with the immutable laws of the universe. The organized church has fought with all its might to discredit the discovery of nearly every great natural law. But today its power to do this is dead. If it can so remodel its beliefs and its teachings as to bring them into harmony with the facts of science it may still become the greatest power for good in the world. But if internal reform is impossible it will give way to some new form of expressing that religious feeling which is inherent in all men and which is destined to play a large part in the life of the future than it ever has in the past.

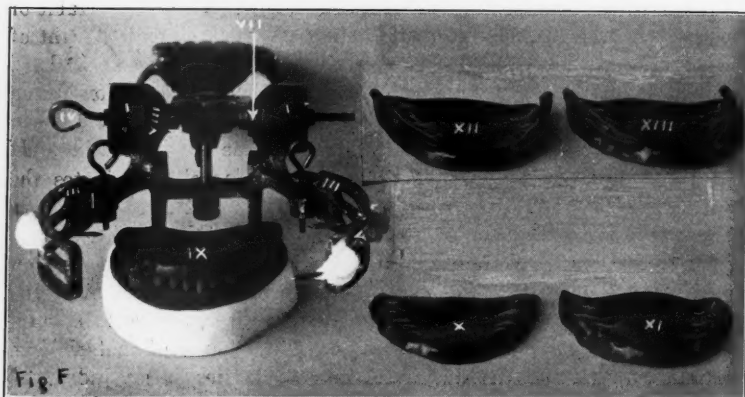


Uses of Homer's Articulator

By Joseph Homer, D.D.S., Boston, Mass.

INTENTION

It is the intention of the inventor of this Articulator to provide an instrument which will permit the user to have a positive check on the amount of fullness and length of the bite or bite-plates so that he can definitely see where to place each tooth if he so desires, as well as a registration which will permit him to remount the dentures on the Articulator after vulcanization in the exact position which they occupied while in the trial state, or while on the wax; also permitting them to move over each other as they would when in the mouth.



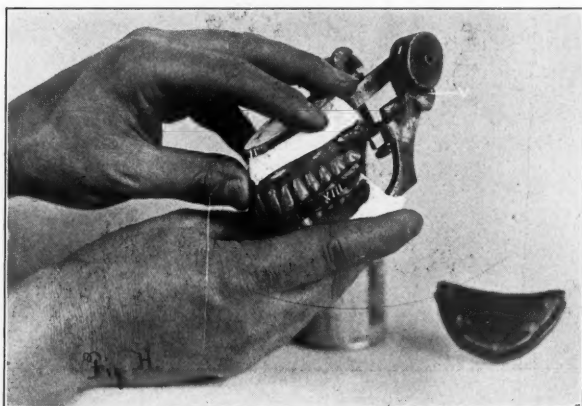
A patient of average intelligence can be made to understand the manipulation and see the advantage of better dentures.

To the critical it may appear that the cart is before the horse; that the description of "To reproduce jaw movements while setting up the case," should precede "Direct recording and reproduction of jaw movements, etc.," and that the jaw movements should be recorded both in setting up the case and after it is finished, which would be logical. The intent is to interest the ninety per cent of the dental profession, who heretofore have paid little attention to anatomical articulation, and not enough to contour and length, in a practical means of improvement, viz., an articulator that suggests looking at work from all sides and new angles.

EXPLANATORY

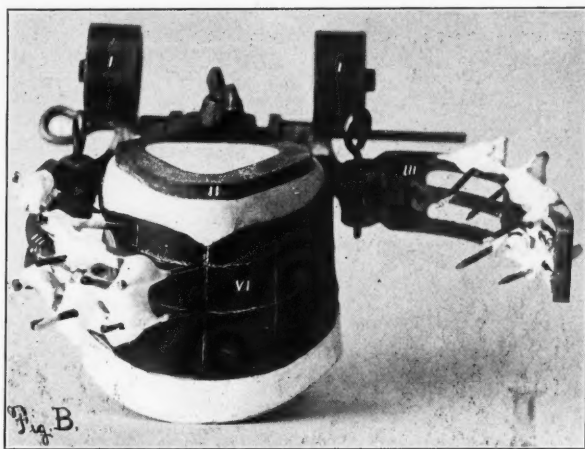
When the king pin (Fig. F, IV) is through holes in the condyle cups (Fig. F, I), the articulator is in anatomical adjustment; when

the king pin is through the holes immediately below the "cups" (Fig. H, V) it is called plain line adjustment.



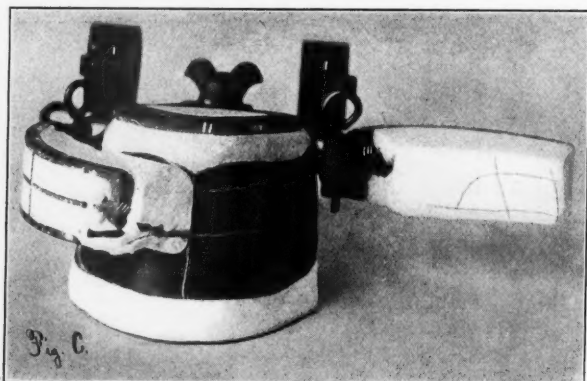
TO RECORD THE MEDIAN HIGH AND LOW LIP LINES, OCCLUSAL LINE AND BUCCO-LABIAL RELATIONS WITH BUCCO-LABIAL INDICATORS

Mount models in the usual way on the plain line adjustment and attach tacks or small finishing nails to "indicators" (Fig. B, III-III)

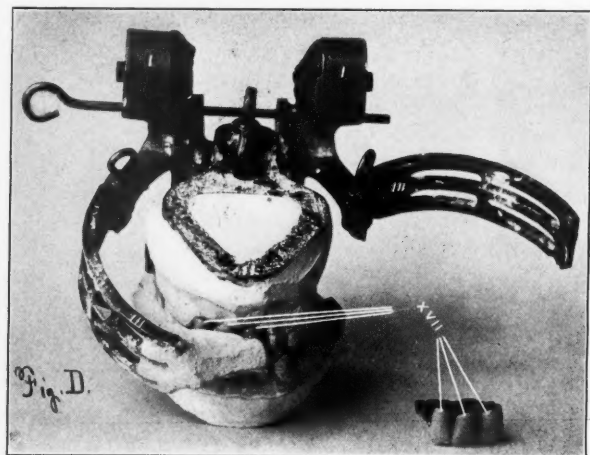


with sealing wax or plaster in such position that the free ends touch the points to be recorded when indicators are closed on bite or bite-plates (Fig. B, VI), or soft plaster may be pressed over any fullness or graved lines on interdental (biscuit) bites or bite-plates, and in-

indicator arms closed thereon (Fig. C, III-III); one nail being incorporated in the plaster to indicate the mesio-incisal angle. A correct



bite, representing the fullness and length of a finished denture, can be exactly reproduced by the use of the "indicators"; hence it is possible for a skilled prosthetist to take a bite and impression and have a plate finished when the patient returns at the second sitting. When the "indicators" are used to record the mesio-incisal angle, line of occlusion lip-lines and fullness, the combined relations of the upper and lower models and proper proportions of the finished denture are plainly in-



dicated, provided a correct bite is taken. Large bridges may be set up on this "articulator" and "indicators" used as for full plates. Bridge or partial plate teeth may be waxed in place in the mouth, an impres-

sion taken of their faces and the buccal or labial of the adjoining teeth; the impression is then mounted on an "indicator" (Fig. D, XVII-III). Where a number of teeth are to receive Richmonds as abutments for a full bridge; the length and location of the incisal tips should be recorded on "indicators" (Fig. E) before the teeth are cut off. The plaster masses (Fig. E, XV) are semi-saddles or guides for mounting new casts of the same jaw in the same relative position after the teeth are cut off.



DIRECT RECORDING AND REPRODUCTION OF JAW MOVEMENTS WITHOUT FACE BOWS OR CONDYLE PATH REGISTERS

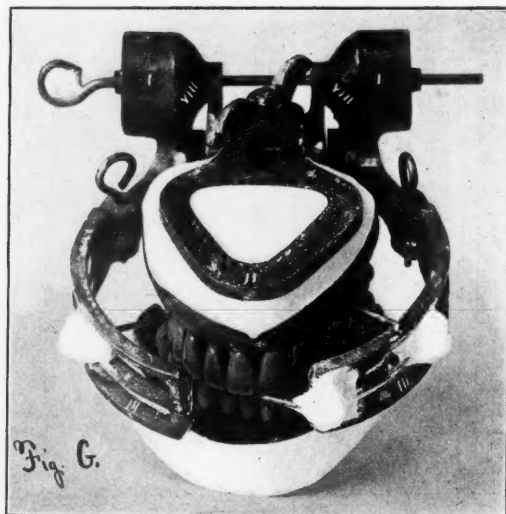
1st. Mount case on the plain line adjustment (Figs. B and C), finishing in the usual way.

2nd. Mold a piece of base plate wax over the lower denture, pressing the cusp points and incisal edges almost through same (Fig. F, IX-X).

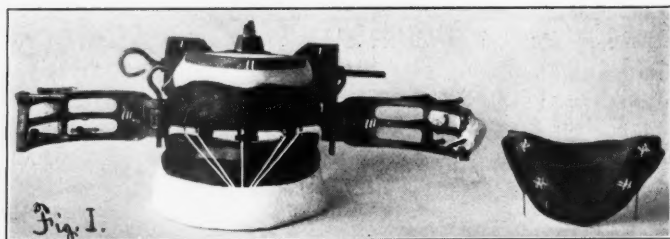
3rd. Insert both dentures in mouth and instruct patient to close with enough pressure to mark wax; slide jaws laterally in both directions until the wax is well marked by the upper cusps (Fig. F, XI).

4th. Remove wax guide path and attach two small rolls of wax to the buccal extremities of the cusp paths (Fig. F, XII). Re-insert, again instructing the patient to move the jaws laterally and hold at each extreme lateral position, while wax rolls are pressed against buccal surfaces of upper teeth with finger or instrument; after cooling wax, remove (Fig. F, XIII).

5th. After adjusting upper jaw to center of anatomical adjustment, mount both dentures in normal occlusion; record the mesio-incisal angle by fixing a nail on one "indicator" and one buccal occlusal point likewise on the other (Fig. G); replace wax guide path over lower denture and secure same with sticky wax; remove king pin (Figs. F and G, IV); fill condyle cups (Fig. G, I) with modelling compound (Fig. G, VIII), building same around condyle lugs (Fig. G, VII), which should be previously oiled; while compound is still soft



(it can be re-softened by dipping condyle cups in pan of hot water or holding condyle cups under hot water faucet) move the upper denture in the wax guide paths from one lateral extremity to the other (Fig. II); this makes slots in the compound in each condyle cup (Fig. E,



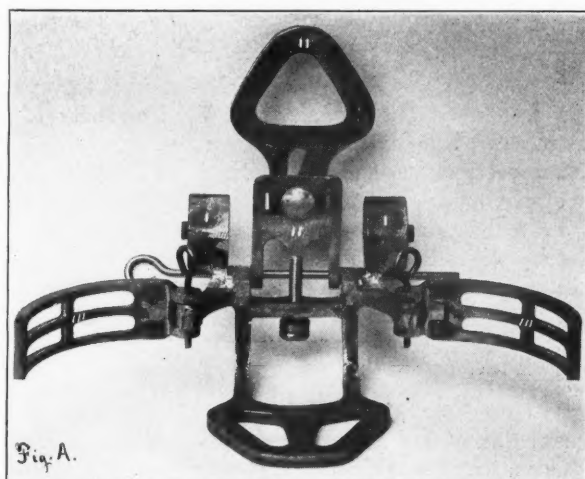
VIII-A) which, when cool, will enable the dentures to move over each other as they would in the mouth, thereby indicating where any grinding of cusps is necessary for anatomical articulation. The same method

with obvious variations may be used to get the antero-posterior movement and necessary grinding.

TO REPRODUCE JAW MOVEMENTS WHILE SETTING UP THE CASE

1st. Make modelling compound bite-plates, inserting three to five tacks or small finishing nails which should protrude about one-sixteenth of an inch from the center of the masticating surface of the upper (Fig. I, XIV). Drill holes for tacks or nails with a bur and fasten with sticky wax.

2nd. Trim top of lower bite-plate to compensate for the thickness of wax guide path (Fig. I, XIV-A) and after recording on indicators the mesio-incisal angle, lip and occlusal lines, angles of mouth and labio-buccal fullness (Figs. B and C), proceed as though both bite-plates were finished dentures, as described in the preceding paragraph.



MAKE OVERS

Where a denture or dentures are perfect, with one or two exceptions, say the occlusal line of the molars and bicuspid is too low on one side. Place the dentures in the mouth and melt wax over the defect, then mark the points where the change is needed, mount the dentures and treat them as though they were bite-plates (Fig. B). This will eliminate many perplexing try-ins.

VARIATION

Experts may make both lateral and antero-posterior guide paths with one piece of wax (Fig. I, XIV-A) and also make modelling com-

pound slots in condyle cups which will answer for both antero-posterior and lateral jaw movements.

REMEMBER

The human jaws have no exacting springs to guide them to place, and are seldom held long in one position.

TO CORRECT A BITE WITHOUT REMOVING CASTS FROM ARTICULATOR JAWS

Take a new bite; loosen nut that holds the sections (Fig. A, II-II). The slots in right angle relations will permit the models to be adjusted to the new bite; tighten the nut.

144 Commonwealth Avenue.

A New Discovery

Discovery of a new anesthetic, eliminating the pneumonia dangers of nitrous oxide was announced by University of Chicago professors recently, after thirteen years of research.

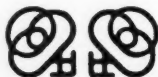
The discoverers of the anesthetic, Dr. A. B. Lockhart, associate professor of physiology, and J. P. Carter, declared the ethylene gas, forming the foundation of the substance, has no effect on the heart and removes practically all danger of pneumonia and lung abscesses, the greatest disadvantage to the use of nitrous oxide.

The Wisdom of Extraction

The next time you are confronted by directions to extract teeth because the patient has arthritis, and your judgment questions the wisdom of extraction and its benefits, it might be well to defer action until you carefully digest the information in Dr. Percy R. Howe's article, beginning on Page 201, The Journal of The American Dental Association, March, 1923.

If the patient is intelligent, it might be wise to have the patient read the article.

G. W. C.

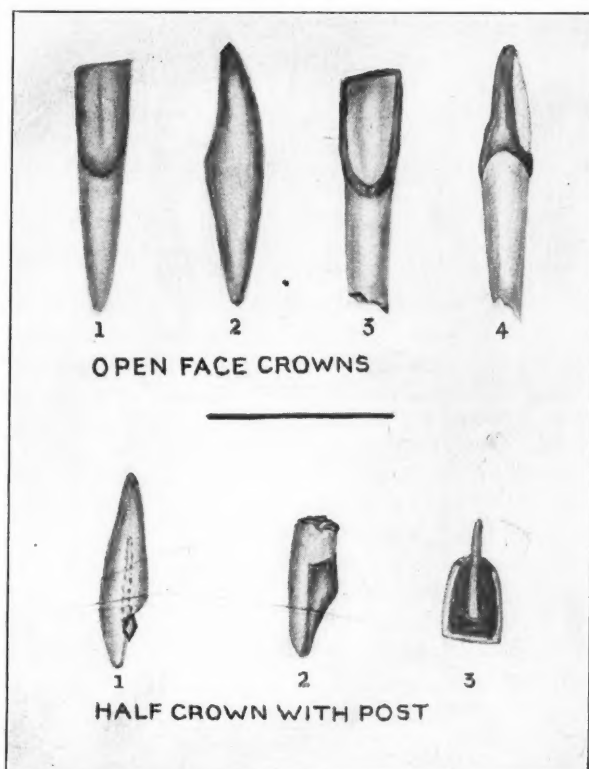


Illustrated Steps in Crown and Bridge Construction*

By Anastasis G. Augustin, D.M.D., New York City

OPEN FACE CROWN

This is a glove-fit and open-face crown; must be snug-fitting to prevent tooth from decay, and its use is recommended only in lower incisors, because these are long and narrow which makes them diffi-



cult to prepare for any other type of crown. Commence by grinding a 24-gauge space at the cutting edge, beveling the cutting edge, and remove all contour from tooth. Figs. 1 and 2 show the preparation; now take a plaster impression and make a die in Melottes metal. Select a shell 30-gauge, 22-karat gold; should be snug fitting on the die; now cut the lingual portion of crown as in Fig. 3; restore contact points and contour; Fig. 4 shows crown completed.

* Copyright by A. G. Augustin, D.M.D.

HALF CROWN WITH POST

This is similar to a Carmichael swaged crown, excepting instead of a horse-shoe groove it has a post soldered to the crown. Used in anteriors where the pulp is devitalized, instead of a Carmichael (Staple), and instead of a Richmond when tooth is sound.

In preparing the tooth remove the palatal contour, bevel the cutting edge, open the pulp canal and enlarge orifice of canal; fit a 14-gauge platinized gold wire as in Fig. 1; take a compound impression, make a die, back it in 30-gauge, 22-karat gold, as in Fig. 2, then either carve it in inlay wax and cast it in 20 karat gold or reinforce it in 30-gauge, 22-karat gold. Fig. 3 shows crown complete.

Replacement of Missing Teeth*

By M. H. and J. C. Mortonson, D.D.S., Milwaukee, Wis.

This account is neither official nor complete. It represents the impression made by the paper upon one in the audience.—Editor.

The basis of all the splendid work shown by the Mortonsons lay in the casting process. One could not help but feel that a technic which could result in such delicate and beautiful bridgework should be the one of choice. A table clinic preceded the paper of the evening, where the various practical cases were exhibited.

In the matter of cavity preparation the rules laid down by G. V. Black were followed with great fidelity. It might be noted in passing that the sound ideas of Dr. Black in this branch of dentistry seem to gain in value with each succeeding year.

Stones and chisels are utilized in cutting the teeth. Burs are inferior to either of these as the blades of steel only serve to create roughened walls instead of smooth margins. Carborundum stones should always be run under water, as the danger of injuring the pulp is thereby minimized.

After the first impression of the cavity has been taken and the wax removed, it should be scrutinized for imperfect margins. Additional wax may be added, where necessary, with a hot spatula, the impression replaced and carved. A heated sprue wire is then inserted, the wax carving removed from the tooth and mounted on a crucible former. The wax impression is first painted with a thin coating of the investment, using a fine camelshair brush. The remainder of the investment is carefully poured into the ring so as to exclude air bubbles.

After the investment has set, the ring is placed in the furnace to dry out, after which the wax is burned out. The latter process should

*Read before February meeting of the First Dist. Dental Society of New York.

extend over a period of one to two hours. A sudden rapid burning out would result in a cracked investment and imperfect cast.

Whether the gold is cast into a hot or cold mold seems to make very little difference in the finished product. The employment of excessive heat in casting will only serve to disintegrate the mold. The essayists preferred a casting machine of the centrifugal variety.

When the inlay has been cast it should be returned to the cavity and the margins dressed with disks before it is cemented.

By means of lantern slides, which were exceptionally clear and instructive, the construction of a Chayes' movable-removable bridge was shown step by step. To the inlays attachments were soldered, and to the cast saddles the telescoping portion was united. The parallelometer served to place the attachments properly, so that the finished piece went to place with no binding.

The paper was discussed by Dr. Chayes and Dr. Gillette. Dr. Gillette condemned the cutting of teeth to the extent necessary in seating inlays for removable bridgework, notwithstanding the fact that Dr. Chayes declared such cutting was no deeper than that required for the ordinary inlay.

Several slides were then presented by Dr. Gillette illustrating numerous cases retained by the humble clasp which had rendered useful service over a period of twenty years. He felt that with such results the clasp should be favored over patented attachments, inasmuch as no sacrifice of tooth structure is required.

The Solution

I am the foundation of all business.

I am the source of all prosperity.

I am the parent of genius.

I am the salt that gives life its savor.

I have laid the foundation of every fortune.

I can do more to advance youth than his own parents, be they ever so wealthy.

I must be loved before I can bestow my greatest blessings, and achieve my greatest ends.

Loved, I make life sweet, purposeful and fruitful.

I am represented in the humblest savings, in the highest stack of bonds.

All progress springs from me.

Who am I?

I am Work.—From *"Brazilian Business,"* published by the American Chamber of Commerce for Brazil.

Origin of the American Dental Association

By W. H. Whitslar, Cleveland, Ohio

The annual meeting of the American Dental Association which meets in Cleveland next September will recall to some of the older members of the profession the leading and forceful characters that organized the Association. Dr. William H. Atkinson and Dr. Chas. R. Butler of Cleveland were of that class.

The American Association first met in a preliminary convention at Niagara Falls, in August, 1859. Dr. W. W. Alport of Chicago was elected President, and Dr. Jonathan Taft of Cincinnati, Secretary. The value and uses of such an organization was discussed, and they finally adjourned to meet in Washington, D. C., July 31st, 1860.

At this meeting Dr. William H. Atkinson of Cleveland was elected President, and Dr. Jonathan Taft, Secretary, in which capacity he served seven times until he was elected President of the Association. There was no meeting in 1861. The next meeting was held in Cleveland in July 1862, at which time Dr. Geo. Watt of Zenia, Ohio, was elected President.

Thus sixty-one years after the first meeting of the American Dental Association held in Cleveland the spirits of the great men of those days will surely hover over Cleveland again in September, and behold the greatest convention of dentists ever held in America.

Dr. William H. Atkinson, who was President at the Cleveland meeting, was one of the most extraordinary men the dental profession ever claimed. His versatility was marvellous. He was a student of the natural sciences and microscopy; he made many researches in pathology, therapeutics, and histology. He was a graduate of Medicine (Willoughby University in Ohio), studied dentistry in Norwalk, Ohio, moved to Cleveland in 1853 and associated himself with Dr. F. S. Slosson, a dentist. He became an "all around" dentist. He was among the early dental clinicians, and had charge of the clinics in 1859 at the Indiana State Society.

In 1861 he moved to New York where he obtained a very lucrative practice, his fees being fabulous for those days, but he did much for charity and hospitality. He organized the New York College of Dentistry, the New York School of Microscopy, devised sets of gold plug-gers and became a very skilful operator. He was an advisor to the many. His last letterhead gives his title as "Consulting Surgeon." While he was regarded as eccentric, he was progressive and aggressive; his magnetism was powerful. In debate he was brilliant, indulging in flights of oratory that only the sophisticated could assimilate.

The writer observed him in the meeting of the American Dental Association meeting at Minneapolis in 1886, when after Luman C.

Ingersoll read a paper on "The Duality of the Peridental Membrane," Dr. Atkinson pulled off his coat (it was a warm evening) and said, "It is now time for the fur to fly." This displayed his aggressiveness for debate and yearning for the assembling of ideas.

Dr. Atkinson was a Spiritualist, and now may his brilliant spirit descend with hosts of other pioneers of dentistry upon the great meeting in Cleveland next September.

General Information for Those Who Will Attend the Cleveland Meeting

CLUBS

Cleveland Athletic Club, 1120 Euclid Ave.

Union Club, 1211 Euclid Ave.

University Club, 3813 Euclid Ave.

Y. M. C. A., 2200 Prospect Ave.

Y. W. C. A., Prospect Ave. and East 18th St.

Sections have been assigned to individual hotels where all their meetings will be held.

All Headquarters are within five minutes walk of each other.

Write *direct* to hotels for information.

SECTION HEADQUARTERS

General Sessions, Public Auditorium.

Operative Dentistry, Cleveland Hotel.

Full Denture Prosthesis, Winton Hotel.

Partial Denture Prosthesis, Winton Hotel.

Oral Surgery, Hollenden Hotel.

Orthodontia, Statler Hotel.

Peridontia, Statler Hotel.

Scientific Research, Public Auditorium.

Mouth Hygiene and Public Instruction, Public Auditorium, (main floor).

Clinics (except surgical), Public Auditorium.

Exhibit, Public Auditorium.

HOUSING HEADQUARTERS

Official Family, Hollenden Hotel.

Delta Sigma Delta Frat., Statler Hotel.

Psi Omega Frat., Cleveland Hotel.

Xi Psi Phi Frat., Winton Hotel.

Hotel Room Rates—Cleveland

HOTEL	ROOM WITH BATH			ROOM WITHOUT BATH	
	Room Capacity	One person per day	Two persons per day	One person per day	Two persons per day
ANSONIA 3848 Prospect Ave.	76	2.00-2.50	3.50- 4.50		
CLARENDON St. Clair Ave. & Ontario	50			1.25-1.50	2.00-2.50
CLEVELAND Superior Ave., Public Sq.	1000	3.00-7.00	4.50-10.00		
COLONIAL 523 Prospect Ave., S. E.	150	2.50-3.50	4.00- 5.00	2.00-2.50	3.00-3.50
DOANBROOKE (Apts.) E. 105th at Euclid Ave.	122	2.50-7.50	4.00-10.00		
EUCLID Euclid Ave. at E. 14th St.	200	2.50-3.50	4.00- 6.00	1.50-3.00	2.50-4.00
GILLSY 1811 E. 9th St.	350	2.00-	3.00- 4.00	1.50-	2.50-3.00
HOLLENDEN Superior Ave. at E. 6th St.	800	3.00-6.00	5.00- 8.00		
MECCA 1862 E. 9th St.	120	1.50-2.00	3.00-	1.50-	
NEW AMSTERDAM Euclid Ave. at E. 22nd St.	350	2.00-	3.50- 4.00		
OLMSTED Superior Ave. at E. 9th St.	300	2.00-4.00	4.00- 6.00		
STATLER Euclid Ave. at E. 14th St.	1000	3.00-8.00	4.50-10.00		
TALGARTH 1924 Prospect Ave.	75	1.50-2.50	2.00- 3.50	1.25-1.50	1.75-2.25
WINTON Prospect Ave. at E. 9th St.	600	3.00-5.00	5.00- 8.00		

That all members desiring to attend the Convention may be comfortably housed in hotels in the downtown district, the Hotels of Cleveland have been asked to fill each room to its regular capacity. Members, therefore, are requested to procure a room-mate or mates wherever possible, and request rooms for groups of 2, 3 or 4 persons.

Use this Application Blank

The Twenty-seventh Annual Meeting of the American Dental Association will be held in Cleveland, Ohio, on September 10th to 14th, 1923.

HOTEL RESERVATIONS

In securing hotel reservations for the coming convention, consult the hotel rate-sheet and fill out the blank application below. Mail it immediately to the hotel you wish to patronize. The hotel will then advise you of the reservation which they make for you.

KEEP THIS REMINDER OF YOUR RESERVATION

S. MARSHALL WEAVER

Chairman

Hotels and Halls Committee

618 Rose Building,
Cleveland, Ohio.

Hotel Selected
No. of Rooms
No. of Persons
Date of Reservation 1923.

Detach here and keep the above for reference

Mail this Application direct to Hotel.

HOTEL RESERVATION

American Dental Association, Cleveland, Ohio, September 10-14, 1923

.....Hotel1923
Cleveland, Ohio

Please reserve the sleeping accommodations noted below:

.....Room(s) with bath for.....people. Rate desired \$.....
(per day)

.....Room(s) without bath for.....people. Rate desired \$.....
(per day)

I hereby agree to pay for room described from ^{morning}evening of September.....to
September....., unless cancellation is made by August 20th, 1923.

List names and addresses of all who will occupy the room with you.

Name Address
Street, City and State

Name Address
Street, City and State

Name Address
Street, City and State

Name

Street

City State



Shall We Have a Vacation Number This June?

If So, Put the Story of Your Outing in Print.

SEND us a description of the "joyful days" you spent on your last vacation—with photographs you like best—and we will do the rest.

If you are one of those who work too hard or, too long or too fast or too continuously, a vacation which will take you away from the office for a month, or even for a couple of weeks, generally proves to be a judicious investment. The story of your outing will interest your fellow practitioners. All copy must be received on or before May 5th, 1923, to appear in June Vacation Number of THE DENTAL DIGEST.



Mail Copy and Photos Direct to
**THE DENTISTS' SUPPLY
COMPANY**
220 West 42d Street
New York City



DENTAL LAWS

Summary of Dental License Requirements Throughout the World

By Alphonso Irwin, D.D.S., Camden, N. J.

CANADA

REQUIREMENTS FOR LICENSE TO PRACTISE DENTISTRY

Dental students are informed that a University Degree in Dentistry does not always give a right to practise the Profession of Dentistry. It is necessary to conform with the Dental Laws of the country or State, Island or Province, in which it is proposed to begin practice. Every province in Canada at present has its special standard requirements for its license, and in most provinces a special standard of general education is insisted upon before beginning the study of Dentistry. Students who intend practising in Canada are advised to register their qualifications in the province in which they intend to practise at the *beginning* of their course in dentistry.

DOMINION DENTAL COUNCIL

The Dominion Dental Council of Canada is a central organization under the control of the dental profession of Canada. Its object is to erect and maintain a standard of education and ethics for the dental profession, and to conduct professional examinations and issue Certificates of Qualification which shall be accepted without further examination by the provinces. For information concerning the requirements of the Dominion Dental Council, apply to Dr. W. D. Cowan, Secretary of the Dominion Dental Council, Regina, Sask., or to the Dental Registrar of any Province.

All Canadian Provinces, except Quebec, have entered into an agreement whereby the holder of a license granted by the Council may practise in any of the subscribing provinces on the following conditions:

- (1) Holding a matriculation certificate of the proper standard;
- (2) Passing the examinations set by the Council;
- (3) Paying the local provincial registration fee.

For matriculation, the Council accepts the Junior matriculation of the Province of Ontario, or Matriculation into the Faculty of Arts of any Canadian University.

DOMINION OF CANADA AND ISLANDS

Dominion Dental Council of Canada, address for full information, W. D. Cowan, Registrar, Regina, Sask.

Alberta—1912—John W. Clay, 914-917 Herald Bldg., Calgary, Alta., or Cecil E. Rase, Registrar, Univ. Alberta, Edmonton. Spring and Fall examinations in Edmonton.—\$50.00.

British Columbia—1919—Registrar, Albert Brighthouse, Vancouver, or Secretary, H. T. Minogue, 510 Granville St., Vancouver. June, November, Vancouver.—\$50.00.

Manitoba—H. A. Croll, Sowis, or C. P. Banning, 908 Boyd Building, Winnipeg. Second Monday in January and July at Winnipeg.—\$40.00.

New Brunswick—F. A. Godsoe, 704 King St., St. John. Fourth Tuesday in June and September at St. John.—\$40.00.

Nova Scotia—1916—G. K. Thompson, Secretary, Chronicle Building, Halifax. May and September in Halifax, Nova Scotia.—\$50.00.

Ontario—1911—W. E. Wilmott, 74 Crescent Road, Toronto. Annual meeting in May; details announced. Examinations at Toronto.—\$40.00.

Quebec—Albert Delorme, 713 St. Catharine Street East, Montreal. April and October; examinations at Montreal, Canada.—\$60.00.

Saskatchewan—L. J. D. Faskin, Regina, or A. R. Weir, Registrar, Saskatoon. June or July; examinations in Saskatoon.—\$35.00.

Yukon—A. J. Gillis, Dawson; details announced by the Board.—\$25.00.

Prince Edward Island—1919—J. S. Bagnall, Charlottetown. May, Charlottetown; time and place announced by Council; annual dues \$1.00. Diplomas of recognized dental schools are registered in Prince Edward Islands.—\$15.00 reg.

Dominion of Newfoundland and Labrador—1906—T. P. Smith, 203 Water St., St. Johns. First Tuesday in July, St. Johns.—\$50.00.

Canary Islands—The requirements are a diploma from a reputable dental college, and besides the passing of a Board of Examiners in Madrid, the payment of a fee, about similar to the requirements of U. S. A. boards.

Cape Colony—The practice of dentistry here is under the direct control of the Colonial Medical Council, in the same manner as the practice of medicine. It is learned from a member of the Colonial Medical Council with reference to paragraph 8 of the Regulations that a curriculum of four years will be accepted only when each comprises *nine months*.

It is also learned with reference to reciprocal acceptance of diplomas (see par. 10 of Regulations) that at present there is no State of the United States of America which is thought to accept British diplomas.

From the Laws and Regulations, it will be seen that unless a dentist has British qualifications, or has been registered in the United Kingdom, it is impossible for him to secure a license to practise in Cape Colony.

INSTRUCTIONS TO DENTAL APPLICANTS FOR REGISTRATION IN CAPE COLONY

The procedure in the case of dental practitioners, desirous of obtaining a license under Section 18 of the Medical and Pharmacy Act, 1891, to practise in Cape Colony, may be briefly summarized as follows:

1. A written application for registration and license to practise should be addressed to the secretary, Colonial Medical Council, Colonial Secretary's Office, Cape Town.

2. With this letter should be forwarded the original diplomas or certificates held by the applicant, a sworn declaration of identity in terms of No. 9 of the regulation following, and a post office order for the sum of two pounds, ten shillings (\$12.16) which is the license duty, payable for admission to practise as a dental practitioner. The letter should also state for registration purposes the place, if known, at which the applicant proposes to practise.

3. The application with inclosures, if in order, is laid before the Colonial Medical Council or the Executive Committee thereof, at the first meeting after receipt for consideration. If approved, a letter is addressed by the Council to the Colonial Secretary in terms of Section 18 of the Medical and Pharmacy Act, 1891, (qv.), recommending that the applicant be registered and a license issued to him.

4. The Colonial Secretary then issues a license, and forwards it to the applicant, together with the diplomas or certificates submitted. The name of the applicant is at the same time registered in the register kept in the Colonial Secretary's office in terms of Section 36 of the Act, and a notice of license is published in the Government Gazette. Until the license in question has been signed by the Colonial Secretary, the applicant is not entitled to practise.

Regulations: The Regulations for Dentists, framed by the Colonial Medical Council, under Section 20 of the Medical and Pharmacy Act, 1891, are as follows:

1. All dental qualifications, certificates, diplomas, degrees or titles recognized by the General Medical Council of the United Kingdom shall entitle the holders thereof to claim registration as dentists under Section 18 of the Medical Pharmacy Act, 1891.

2. In reference to the foregoing, any person claiming to be licensed and registered as a dentist under the Medical and Pharmacy Act, 1891, on the grounds that he was in practice before July 22, 1878, will be required to produce the certificate of the General Medical Council aforesaid to that effect, and if his name be not upon the last published Dentists' Register, he will be required to account for it satisfactorily to the Council.

3. The holder of any diploma of Licentiate Dental Surgery, granted by any of the Medical authorities of the United Kingdom, empowered so to do by the Dentists' Act, 1878, shall not necessarily also produce the certificate of the General Medical Council, (which) reserves the right of applying to the secretary of the body, granting such diploma, for information as to whether the name of the possessor is still upon the register or record of the body of which such person holds the license.

4. An applicant may be called upon to appear before the Colonial Medical Council to prove his identity or to give evidence as to his good character.

5. The secretary shall from time to time, write and forward (duly registered) a letter to any registered person, addressed to him according to his address upon the register to inquire if he has ceased to practise or has changed his address, and if no answer be received within six months, his name shall be erased from the register.

6. Any qualification, registerable in accordance with Rule 1 acquired subsequently to first registration, shall be registered upon payment of a fee of five shillings.

7. All matters, referring to dentistry that may come before the Colonial Medical Council, shall, where practicable, be referred to the dental number of the Council for his advice.

8. All dental diplomas registerable in the Colony, shall be required to cover a minimum curriculum of four years, i. e., (a) two consecutive years' attendance at recognized medical and dental hospitals and schools, with (b) proof of having been engaged during a period of not less than three years in acquiring a practical familiarity with the details of mechanical dentistry under the instruction of a competent practitioner, provided that one year of such instruction may be taken concurrently with the attendance on hospital practice and lectures. Provided also that in the case of qualified medical practitioners, two instead of three years shall be sufficient.

In all cases a satisfactory preliminary examination in general education must have been required.

9. All applicants shall submit together with their diplomas or certificates, declarations sworn before a justice of the peace, (a) of personal identity, (b) of the authenticity of the said diplomas or

certificates, (c) of the fact that they are entitled to practise as qualified dentists in the countries where the said diplomas or certificates were granted, and that they have never been debarred from practice in any country by reason of misdemeanor or professional misconduct.

10. No diploma granted by the Government or any university or other body of a foreign country shall entitle the holder thereof to registration as a (medical practitioner or) dentist in this colony unless equal rights and advantages are given in such country to the holder of any British registerable degree.

11. Regulation No. 10 of the 24th of February, 1902, shall not apply to any person born in the Colony or domiciled therein prior to the said date, who shall at the said date have completed or have been actually pursuing in a foreign country the recognized dental course for obtaining a dental diploma, in such country.

Cape Colony, together with Natal, Orange Free State and Transvaal, constitute the Union of South Africa.

Cape Verde Islands—These islands are located in the North Atlantic ocean about two hundred miles from Africa. They are of volcanic origin with coral accretions. There are ten islands included in this group, including a total area of 1240 square miles, and a population of about 70,000, mostly negroes. The language spoken is a bastard Portuguese. The Portuguese dental colonial laws, if any, are enforced. The Portuguese reserve dental licenses for natives educated in Portuguese schools; Medico-dental education is approved. There are some English and other foreign residents. The climate is unhealthy for whites.

For other details address the Colonial Minister, Fereira da Rocha, Lisbon, Portugal.

(All States, Nations, etc., to be printed alphabetically)

On Guard

On February 26th a man was convicted in a New York court for selling spurious packages of a well-known dental cement. He is now serving a prison term.

Reports from different parts of the country indicate that this is not an isolated case, and that the practice is not confined to cements.

Our readers are cautioned against purchase of goods from unknown "fly-by-nights" who may offer standard goods at reduced prices.

There are enough dealers known to be reputable to enable any dentist to keep himself supplied with necessities. It is poor administration to defer purchases until materials regularly used are nearly gone and an emergency threatens.

DENTAL ECONOMICS

From the Patient's Standpoint

By One of Them

Several months ago while awaiting my turn with the dentist, I made a discovery. I really found a new magazine on the table in his reception room. It was not only a late issue, but also a new publication to me. The name of it was *THE DENTAL DIGEST*. With the exception of one or two rather deep subjects, such as canal irrigation and engineering, I found it quite readable and understandable. Since that first discovery, I always make it a point to arrive early for my appointment in order to read the *DIGEST*, and from it I have acquired some valuable information.

I have noticed, however, that all the articles are either by dentists, their wives or their assistants. This is natural, of course, in a publication intended primarily for the dental profession, but it does seem that perhaps a voice from the patient might not be amiss. It may be a case of "fools rush in," but I have read what the dentist, his assistant and his wife have to say about each other and us, and now I think it is high time that we, the patients, get together and frame a list of things to do or not to do of our own.

In the very first place, why doesn't Brother Bill encourage every dentist to take out a life subscription to two or three good monthly or weekly magazines along with his insurance? It would be a good office investment. If one has a jumping tooth, it is pretty hard to concentrate on a last year's "Vogue" or a "Judge" from the year before.

Next, whenever I go to a strange dentist I sometimes wish I had subscribed to a correspondence course on how to meet strangers. The nurse knows my name and I assume that she also knows the dentist's, but it has been my experience to have her shove me into the room, so to say, and then immediately make a hasty retreat, shutting the door behind her as though she feared I might make an attempt to get away. Of course I know she has gone to dismiss the previous patient, and I also know that the dentist is very well aware of who I am, because he plucks a neat little card out of somewhere, all duly labeled, to which he adds further personal and historical facts. Just the same, though,

it does seem to me that the nurse might linger long enough to introduce me to the dentist. I am sure I would feel a little more like the guest of honor than merely the next set of teeth on the appointment book.

Once inside the doors which divide the reception room from the operating room—big heavy doors which ooze one patient out and another in without giving a hint of what goes on behind them—I am apt to be touchier than usual about small things. I notice every little detail and am super-critical. I want to know positively that the dentist has washed his hands. Now I feel sure that every dentist does wash his hands after each operation, if only for his own sake, but I rather like to see him do it, or at least hear him. If he only turns on the water and splashes it around a bit, it works wonders with my esthetic imagination. That is, it does if he doesn't indulge in highly scented soap. I prefer an ether cone to strong soap, stale coffee, tobacco or chewing gum, when I am in the dentist's chair. Ordinarily I approve of most smells except garlic and asafetida, but this is not an ordinary occasion and I am not my normal self.

I hate to have the nurse lay me out in full view of the window and the neighbors across the way, with the sunlight glaring in my eyes, and then go away and leave me for four or five minutes while she and her chief discuss Mrs. X's appointment.

I rage inwardly when the dentist, with the assistance of the nurse, finally succeeds in getting a rubber dam in place and then calmly asks me a question which demands an answer. It puts me at a disadvantage, and no one likes that, especially a woman. I really am a good listener and enjoy listening. But when I am paying for it at the rate of \$10.00 per hour, I am rather particular what I hear. Stretched out in a chair, a gag in my mouth and a bib under my chin, I am neither in the position nor the mood to enjoy listening to anything except the clock ticking off the minutes which I am paying for but not enjoying.

When the nurse finally releases the dam and tells me to rinse out my mouth, I am at the pinnacle of crankiness. I am suspicious of the glass at my elbow. It was there when I came in, and as I came in another patient went out. If it was changed, when was it changed? But the nurse stands over me waiting for me to obey orders, so I gingerly drink out of the only glass in sight. But why can't they put a clean glass there after I am in the chair, so that I can be sure it is a clean one?

As a patient, I think I am entitled to a certain amount of sympathy. I know that leaky teeth are as common in a dental office as flat tires in a garage, but that doesn't lessen the personal feeling I have for my particular ache. It is mine, and as the owner of it I feel somewhat removed from the rest of the mob. The most tactless thing a dentist can do, in my opinion, is to belittle the patient's suffering. Let him

ignore it if he likes, but he should never insinuate by looks or words that he thinks we are doing anything other than bearing up under great pain. We all of us lap up sympathy like a kitten laps cream, but we do not like to have anyone think we are getting it under false pretenses.

I don't like to have the dentist murmur gently, "Now this isn't going to hurt," for then I know he is going to hurt me from the crest of my wave right straight down to my rubber heels. But on the other hand, if he says, "Now this is going to hurt pretty badly," I tune myself up to receive such a high voltage of pain that when it does come I scarcely notice it.

After all, it is an hourly occurrence with the dentist, and merely a semi-annual one with me.

In closing, let me say that I think the dentists are pretty good fellows after all. They usually have to put up with the worst of us and, on the whole, they take it admirably.

Most of us are woefully ignorant when it comes to our teeth. We know they are there and we use them, but we really don't pay much attention to them until they warn us of trouble, then we go reluctantly to the dentist and depend upon him to put them in working order again. The damage once repaired, we are rather inclined to think our teeth ought to last forever.

A little more patience on the part of the dentist and a great deal more dental education for the public will bring us closer together and do a great deal toward preserving the teeth of future generations.

Sellem of Pribilof, Farthest North

By Walter S. Kyes, San Diego, California

"Good morning, Doctor, great morning this! Right off the bat, Doctor, I'm a stock promoter. I sell stocks in oil in Texas, gold mines in New Mexico, hog farms in Louisiana, match factories in Tahiti, rubber plantations in Mexico, bottle stoppers in New Jersey, or ice cream cone companies in Point Barrow, Alaska.

"Frankness is my chief attribute, Doctor. I may be dishonest, I may drink a little scotch and soda, play the ponies, or, oh, yes, you may have discerned the rest, but above all else, I'm, as I said before, frank.

"You are a thrifty, hard-working dentist. You have a wife and some kids. Just now the children are in high school learning to play tennis. By and by you hope they will enter College where their interests will shift to football, sororities and fraternities.

"Your wife is a hard worker and makes her own hats. You have aspirations of your own. Some day you want to travel—to see foreign lands, to study the habits, customs, religions and politics of foreign people. Of course, you would prefer to go to New York and do this, but you feel that living would be too high there, so you plan to study the foreigner in and about his favorite haunts.

"Also, some day, you want to go to California, and take a fling at chickens or lemons or alligator pears, so that after a time you will envy the tourist the wealth and leisure that enable him to so enjoy your own climate.

"Now, isn't this so? Of course it is, Doctor. But, I have digressed—pardon me. To be frank, I want some of your money, *some of your money!* Do you get that, Doctor? Not all of your money, of course, but all that you can spare. Of course, you don't know me from your great grandmother's niece's ghost, but what difference does that make? None whatever. But to be frank, I'm Sellem, Jay Hamilton Sellem. I'm from the northernmost of the Pribilof Islands, the one that required three years in which to cool off after nature shoved it out of the icy waters of the Behring Sea—some island that. But to return to the money again.

"I want some of yours, you know me now, and where I am from. Of course, I have no recommendations, no stock salesman ever does have for that matter, but I'll tell you, Doctor, I'll take you out to lunch. The lunch will cost me, say six bits, and that ought to give you great insight into my character. In the old days you might have come back, feeling that you had known me all your life, but not now, alas! not now.

"I'm offering today City of Vienna bonds. In the good old days of the Hapsburgs they were worth two thousand dollars each. Never sold for less. Now they are selling at thirty dollars, or is it thirty cents? Let me see, thirty, thirty dollars on the curb. You know, of course, that Vienna is the most hard-up city in the world. She has neither money nor corn meal. The Allies, you will recall, cut off all of her natural resources and just how the devil she will ever pay these bonds is more than I can tell, but she can repudiate them, and not even the Allied armies can get oil out of marble or blood out of a turnip. But everyone is buying a few of these bonds as a long shot. Sure, of course they are; for instance the old woman who runs the little flower shop over on Broadway and Doctor Hitemhard up on the eighth floor, they both own City of Vienna. Me? no, I'm selling them, they may be forgeries; I never investigated them from that standpoint. You never do investigate anything you buy. You just take it over and lock it up in the safe, and make some more money with which to buy more. We promoters have to live. If you fellows quit buying, we would all have

to go to work! That would be tough on us, because that old stuff about the sweat of one's brow doesn't apply to us, except when we take a party up to the mines in the good old summer time. But you won't be sorry about the bonds at thirty. If you go to Vienna on the trip you plan, take the bonds with you and present them to the City Treasurer. If he orders you kicked out of town, you just head for the nearest bridge and jump off. That will be easy enough, and after you cool off, you can reflect on the situation.

"Now as I stated before, frankness is my long suit—that is, since I have become converted to the belief that the world is flat. I'm going to be frank with you, Doctor, if it takes my last tooth and exhausts my last scrap of honesty.

"Of course you took two of the bonds on my say-so, taking it for granted that I was Sellem of Pribilof, Farthest North. The fact that the bonds may be worthless is neither here nor there. I've got the money and you have the bonds, and you had all the hard work of creating the wealth which I will enjoy spending, so there you are! Great old world, isn't it, Doctor?

"Now here's a letter. It begins, you will note, with the statement that—'If you put these papers in your waste basket, give the basket to your wife for safekeeping!' Pretty clever idea, isn't it? But the truth of the matter is, it should read—'If you put these papers in the waste basket, ring for the janitor to empty it at once.'

"This is an oil proposition, another chance to keep the wolf from the door of the promoter, and to send your name ringing down the years as an easy mark. You will also note that last August, according to this letter, the world was startled by a noise like a Mexican revolution, or a great Democratic victory, which was, in truth, only a gusher coming in in Texas.

"This map which looks so much like a cross section of a neglected brick yard, represents the underground strata of the soil through which we expect to drill, and down here, twenty-eight hundred feet and ten inches, to be exact, is said to be enough oil to put every dentist practising in America today, on one of the aloof avenues of the rich. Of course you know, Doctor, he may be there studying architecture from the outside, or just riding in his car. We don't go into useless details, and to be frank, Doctor, that large, black pool of oil may not be any larger than a fly speck on your garage door when we get down to it, but of course you pay your money and take your choice. Did I say choice, Doctor? Excuse me, I meant chance. How did we get this admirable location less than two thousand feet from the great gusher? Well, let us see, or let us read. Oh, yes, the graveyard.

"You see, right in the heart of this district, there was a negro graveyard. Drilling holes in a white man's graveyard would be a

desecration, of course, but with a negro graveyard in Texas, it makes little difference. In an oil district everything gets smeared up and black in spots so that you couldn't tell a cemetery from an apiary. Well, the cemetery association finally, for a tidy sum, granted permission to sink a couple of wells and our company got the lease. The only trouble, Doctor, with the location is that there are so many oil and gas producers in that location, the drillers often get asphyxiated while working, and they have to wear asbestos shirts as a preventive measure in case fire should break out.

"As I stated in the beginning, Doctor, I wish to be frank with you. In fact, I am determined to be frank. Now the fact of the matter is that this oil well should be down just one hundred feet tonight. Let us see, our offices are on the tenth floor. That is where the well was actually spudded in, which would mean by this time the drills are just breaking through the ceiling of the fourth floor and barring interference from the federal government, we will break into the graveyard in time to be the bearers of the latest news from Gabriel, to say the least.

"In case the amount is over-subscribed, you can look for refund about the time you find a leading Democrat serving in a Republican President's cabinet. Yes, thanks Doctor, for your subscription. I finally got some of your money, that's my business.

"And by the way, Doctor, it's odd how we ever put it over, and get the money, isn't it? You know, to be frank, we promoters get close to one hundred million a year easy money, out of the American people. It takes a lot for us because we live high, but then there is one born every minute or so, which gives us big odds. If it wasn't for the Government actions brought against us for violating the postal laws, it would be a great business. Think of it, Doctor, suits involving one hundred and fifty million dollars in the Federal Court today. We'd have easy sailing if it was not for that, but it's not so bad at that.

"Doctor, do you know, I'd rather sell stocks to a dentist or a physician than any other person. I have a warm personal attachment for them. Funny how things date back in life. When I was a small boy, I was in ill health most of the time, and took lots of medicine, bitters and such stuff. Established a true affection for dentists and doctors right there probably. Returning home a few years ago I went over to the old farm and scratched around among the weeds, and sure enough there were the dear old bottles, empty of everything but memories, back there among the New England hills. Well, well, Doctor, I'm keeping you from your work, and if you don't work, *I can't live*, so hop to it.

"Thank you for the custody of your hard-earned, and good luck to you. Don't forget me, Doctor, Sellem of Pribilof, Farthest North, yes, Jay Hamilton Sellem."

PRACTICAL HINTS

This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions and Answers should be sent direct to him.

NOTE—Mention of proprietary articles by name in the text pages of the DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule. This Department is conducted for readers of the DENTAL DIGEST, and the Editor has no time to answer communications "not for publication." Please enclose stamp if you desire a reply by letter.

Editor Practical Hints:

Can a true case of pericementitis have for its only symptom an elongation of the tooth? Also is an elongation of the tooth necessarily a sign denoting the patient as once having a case of pericementitis?

A. G.

ANSWER.—A tooth without an antagonist may become elongated from pericementitis without any other symptom, but if stress is brought to bear upon the tooth by an antagonist it would seem that the symptom of pain or soreness is inevitable. A case of the elongation of a tooth without occlusion is certainly not necessarily the result of pericementitis.—V. C. SMEDLEY.

Editor Practical Hints:

Will you please give me the method of using Sodium and Potassium in root canal work?

Please explain technique of treating and dressing canal after Sodium and Potassium have been used.

J. L. A.

ANSWER.—Sodium and Potassium come in a sealed glass tube. In preparing for the work this tube should be filed at a point opposite the Sodium and Potassium, which can be plainly seen through the glass. The tube is broken at this point. When through using the tube it should be carefully sealed with hard wax. The tooth should be covered up very carefully with the rubber dam and the pulp chamber opened in the usual manner. Then the pulp canal should be cleansed as best you can with pulp removers and canal cleansers, and a small amount of the Sodium and Potassium picked up on the end of a broach and

carried as far up into the canal as possible. If there is much moisture in the canal there will be slight explosions as the Sodium and Potassium unite with this moisture, but no harm results from these explosions. Carrying the Sodium and Potassium through the canal should be repeated until you feel that the canal is pretty well cleansed, being careful, extremely careful, not to carry any through the apex of the canal. It should then be washed with sterile water, washing it as many times as is necessary to show no discoloration on a wisp of cotton. If there has been evidence of infection beyond the apex, the canal should be dressed with Dichloramine-T and Chlorocasene; in fact, this is probably the best dressing in any putrescent case. If it is a case where a pulp has been recently removed it can be filled at once. The Sodium and Potassium unite with the organic contents of a canal, saponifying them so it is equally efficacious whether the pulp is broken down or not.—V. C. SMEDLEY.

Editor Practical Hints:

I have a patient who has no visible signs of pyorrhea, but presented himself with exposed root tip (disto-buccal) of upper right six-year molar. The rest of the tooth appears in healthy condition. Patient informs me that face was badly swollen on that side for several days. Could you kindly suggest treatment?

S. E. A.

ANSWER.—An X-Ray will undoubtedly assist you in determining the condition and advisable procedure with this tooth. In all probability the pulp is non-vital, but if the X-Ray shows no apical destruction on the other roots, and the patient is in good health, I think you would be justified in opening the tooth up through the occlusal, fill the root canals and possibly amputate the exposed portion of the disto-buccal root. If, however, there is no suppuration or inflammation of the gums adjacent to this root tip there might be no objection to leaving it remain without amputation.—V. C. SMEDLEY.

Editor Practical Hints:

Please give me information regarding this case.

Several months ago patient came to me with lower anteriors somewhat out of line. I fastened a band on the first molars with an inner and outer arch wire. After having teeth straightened, we got an irritation of the gums around same, and also of the upper anteriors. One central has a porcelain jacket crown and the lateral a Richmond. The gum sloughed away from the necks of the crowns and also from the necks of lower anteriors.

I treated same with a special paste but without results. Also used an astringent, but no results.

Please give me some treatment for this case.

E. P. G.

ANSWER.—From your description of this swollen gum irritation, I would judge it to be Vincent's Angina or Trench Mouth. We have found the most effective treatment for this distressing ailment to be saturate aqueous solution of trichloroacetic acid. Apply to the carefully isolated and dried affected gum area. This is allowed to remain undisturbed from three to five minutes and is then neutralized with solution of baking soda.—V. C. SMEDLEY.

Some copy, with pictures to match, telling about the health acquired and enjoyment experienced during your last vacation will please your friends in the Profession when printed in the June DENTAL DIGEST. ∴ ∴ ∴

DENTAL LABORATORIES

EDITOR'S NOTE.—Publication of theories or methods of technical procedure in this Department does not necessarily mean that they are endorsed by the Editor or the Publishers of THE DENTAL DIGEST.

A Few Pointers Relative to Preparation of Cases for the Laboratory

As Submitted by an Association of Laboratories

RUBBER DENTURE WORK

1. Take *good* impressions either in plaster or by the Closed Mouth Impression method.
2. Build up your bite rim and trim to desired length and fullness.
3. Indicate median line, high and low lip lines, and mark the corners of mouth.
4. Use good separating fluid for plaster impressions. Be sure it is not thick, as the use of too thick fluid will fill up all the fine detail and spoil a really good impression.
5. Make your model in artificial stone for best results.
6. If you have mould guide or chart, select the mould to be used.
7. Be sure to stipulate what make or kind of teeth you wish used.
8. If you have no mould guide, describe the features of the patient and make of teeth to be used.
9. Always try-in your case after setting up, that is the time to study the shade, mould, occlusion, length, etc., and to make the necessary changes.
10. Always state whether you want a Vacuum Chamber, Relief or any other preparation made on the model for the retention of the plate.
11. Allow a reasonable length of time to do the work required, as we have many to serve and *good* work requires time. Mail and messenger service must also be considered a part of the time required.
12. Always write your instructions and be sure to write them all. Do not expect the Laboratory to guess at your requirements.
13. Pack the case carefully and be sure to put your name on the box.
14. When sending to a Laboratory for the first time, state whether work is to be sent C.O.D., or enclose check for enough to cover charges.

15. If you desire to open a charge account, give at least two reliable Dental Supply Houses or Banks as references. Your credit may be A-1, but we do not always know it until we get acquainted, so do not think we are insulting you by sending C.O.D. We want your business, but we have to watch our step.

16. Do not expect the Laboratory to work with less than you require yourself in order to get best results.

17. Always stipulate the color of rubber you desire to have used, and if you want any of the special pink front rubbers, state which.

18. State whether you desire to have the case festooned.

19. If the impression has been taken by the Closed Mouth, or correctible edge method, state whether you desire to have the edges left as they come from the flask or not.

20. Co-operate with us and you will find us willing to meet you more than half-way.

CROWN AND BRIDGE WORK

1. For Gold Crowns take Plaster Impression, Wax Bite, Impression of the opposing teeth, and Wire Measurement of neck of tooth.

2. State which teeth you wish crowned.

3. State whether crowns are to be reinforced.

4. Abutments should be tried in the mouth and new impression taken for the completion of the case. Follow the same technique as for making of the crowns.

5. State the shade you wish used and the number and style of the supplies to be used.

GOLD PLATE WORK

1. Take good impression same as for rubber work and make your model.

2. Outline just where you want the plate to run.

3. Either trim the model yourself or indicate where you want to have it trimmed.

4. Indicate where and shape of relief, if any.

5. State how plate is to be finished; rubber attachment, soldered attachment, etc.

6. On partial cases indicate where you want clasps, if any.

7. Always try-in and fit the metal base before finishing case.



What Is a Dental Technician?

By W. A. Sanford, Oakland, Calif.

PRESIDENT, NORTHERN CALIFORNIA ASSOCIATION OF DENTAL
TECHNICIANS

In writing on this subject, the author is moved by a sincere desire for a better understanding, closer relationship and co-operation between the Dental Profession and the dental laboratories.

Dental laboratories may be divided into two classes, the "Sweat Shop" and the "Quality Laboratory."

The "Sweat Shop" is a so-called dental laboratory, usually conducted by the incompetent, inexperienced, irresponsible, mercenary type of grafter, without a soul or conscience, where speed and quantity prevail with all the accompanying accidents, inaccuracies and disappointments, and quality and accuracy are conspicuous by their absence.

In some of our larger cities the "Sweat Shop" is becoming a serious menace to the Dental Profession as well as the general public, who in the end always pay the bill.

A Quality Dental Laboratory is characterized by the following qualifications: Quality, courtesy, progress, experience, accuracy, efficiency and service. In order to insure these qualifications, a Quality Dental Laboratory cannot be successfully managed by a mere mechanic, nor is it possible for a good business man with little or no knowledge of Dental Prosthesis to attain any degree of success.

After a careful survey of available material, the writer has chosen for example, a man of middle age, possessed of exceptional mechanical ingenuity, with early training which laid the foundation for his life work. He is honest with himself first, because it is necessary; he is accurate, progressive, efficient, resourceful and has a conscience. He is human and practical and therefore capable of intelligent interpretation of ideas or instructions which are submitted to him by the dentists. His slogan is always "Quality First." He is willing at all times to acquire some new dental technic or scientific knowledge which might enhance the value of his services to mankind.

If it is not your good fortune to know of any living person with the above qualifications, it is indeed gratifying to assure you that there are several living specimens in existence today.

In looking about for a name befitting our calling, our committee on nomenclature gave mature consideration to the numerous existing cognomens, such as "dental mechanics," "lab. man," "lab. worker," "mechanical man," "mechanical dentist," etc.

It is the last two that cause us the greatest amount of uneasiness, and anyone who may chance to visit one of our large toy emporiums

will see mechanical toys of every description, although with varying degrees of ability. Fortunately, the "mechanical man" has not been developed to a point where he can even walk alone, while the "mechanical turtle" appears more independent. If the day ever comes when the "mechanical man" can be wound up and made to do the same stunts that we are doing, our goose will be cooked.

The committee found material in our organization which seemed to measure up to a somewhat higher standard than the above-mentioned "mechanical toy." Hence their report which follows:

Technology—the science which treats of the fine arts, particularly the mechanical.

Technician—one particularly skilled in his work.

Dental Technician—one particularly skilled in Dental Prosthesis, or Dental Mechanics. Quality Dental Laboratories are conducted by Dental Technicians.

Many dentists have had the misfortune of meeting the young man with three, six or twelve months' experience in some laboratory where he has been employed as polish boy, plaster or errand boy, or similar position of minor importance, by no means a full-fledged mechanic, but nevertheless full of ambition. He boldly informs you that he has opened a first-class dental laboratory. You meet Dr. Jones on the street and he suggests that we give the young fellow a chance.

Dr. Jones has an emergency case from a very dear out-of-town patient, a full upper denture, we'll say. The young "lab. proprietor" calls for the impression. Dr. Jones gives the usual instructions with implicit confidence in the final outcome, but when try-in comes back on a second-hand plain line articulator, upside down, teeth of unknown brand, mostly covered by yellow wax and with no semblance of occlusion, Dr. Jones was inclined to be lenient with the boy, and after ordering mould and shade of teeth indicated, decided to try and set them up himself. He then gave it to the boy "lab. proprietor" to vulcanize and finish. To make a long story short, the case was a wreck and failure from start to finish, and Dr. Jones' patient had to leave town next morning without his "top teeth," and with an everlasting conviction that Dr. Jones was no dentist.

The point at issue is: Does it pay to patronize an inexperienced, irresponsible laboratory man?

The Dental Technician should be not only capable of intelligent interpretation of ideas submitted by the dentist, but should be willing and able to suggest a better method, if possible, provided that in the finished product superior results obtain.

The Dental Technician is not grown up, but has a conscience and keeps his ear to the ground, and never forgets his duty toward the Dental Profession; he is not too lazy to keep abreast of the times, in both

knowledge and equipment. He must maintain a staff of carefully trained and highly skilled dental mechanics, capable of executing in the most expeditious and thorough manner anything pertaining to Dental Prosthesis.

Physicians' Bldg., 1225 Washington St.

Oakland, California,
February 1, 1923.

Editor DENTAL DIGEST,
New York, N. Y.

Dear Sir:

On and after January 1, 1923, the NORTHERN CALIFORNIA DENTAL LABORATORY ASSOCIATION will be known as the NORTHERN CALIFORNIA ASSOCIATION OF DENTAL TECHNICIANS.

The following officers were elected for the ensuing year: President—W. A. Sanford, Oakland, Calif.; Vice-President—C. P. Remy, San Francisco, Calif.; Secretary-Treasurer—W. B. Puterbaugh, San Jose, Calif.; Assistant Secretary—J. L. Halley, San Francisco, Calif.; Executive Committee, in addition to above named officers is composed of the following members: Dr. J. P. Jaegeling, E. W. Hyland, John Chase, Neall Cooke, of San Francisco, with Arthur Sobey of Oakland, Calif.

In addition to our regular table clinics, the NORTHERN CALIFORNIA ASSOCIATION OF DENTAL TECHNICIANS has an extensive educational program mapped out for the ensuing year, consisting of lectures and papers on dental histology, anatomy, pathology, chemistry, metallurgy, orthodontia, oral surgery, and other subjects which are directly or indirectly involved in the intelligent interpretation and execution of our work.

Yours very truly,

NORTHERN CALIFORNIA ASSOCIATION OF DENTAL TECHNICIANS.

By W. A. Sanford, President.



DENTAL SECRETARIES and ASSISTANTS

Secretaries' Questionnaire

All Questions to be addressed to Miss Elsie Pierce, care of
DENTAL DIGEST, 220 West 42d Street, New York City

In the income tax report, can donations or Christmas gifts be deducted?

Donations are not allowed unless made to incorporated institutions. Christmas gifts to employees cannot be deducted either, except they are given as bonuses and an established practice each year.

How may the marks from rubber dam holder be prevented on cheek?

Most assistants use a folded piece of gauze or a little cotton. We find the little oblong squares of pressed cotton, such as found in the J. & J. boxes of cotton points, ideal to place under the holder clamp next to the cheek. Some dentists use a rubber dam holder that does not need the elastic around the head. Would suggest that you also place a square of gauze under the rubber dam to keep the chin free from moisture.

When was the Secretaries' Questionnaire started? Please give instructions for mixing cement.

The Secretaries Questionnaire first appeared in the September, 1922, issue of THE DENTAL DIGEST. The January issue contained directions for mixing cement.

Would you advise keeping a telephone record of calls?

It is a very fine idea and enables you to check the telephone bills readily. Keep an index of the telephone numbers of the dental depots, the doctor's personal friends, so that you can get them without looking up the numbers each time, the nearest taxi station, the numbers of the neighborhood physicians, hospitals, etc., and any other information that you might need and need immediately.

Should denatured alcohol be used?

Denatured alcohol has no place in a dental office except for use in spirit lamps.

Where can I obtain permit to purchase alcohol in New York?

Write to the Federal Prohibition Director, 1107 Broadway, New York City, for application.

What can be used to prevent nausea when using rubber dam or other appliances?

Swab mouth and posterior palate with a solution of adrenaline chloride.

What is Copr-Zinc used for?

Copr-Zinc is added to cement when used for crowns, inlays, or bridges, to prevent saliva infiltration and putrefaction by decay. Four parts of cement and one part of Copr-Zinc is generally indicated. It is not used when mixing cement for facings or porcelain inlays when the shade is important.

When should an acid or alkaline mouthwash be used? (See December issue.)

A correspondent writes that according to the latest chemical research when the saliva has an alkaline reaction an alkaline mouthwash is indicated, whereby a saliva slightly acid is stimulated to flow, neutralizing the alkalinity of the mouthwash. It has been conclusively proven that the saliva remains of an acid content for some time thereafter. Thus the index of the saliva is changed from alkaline to acid by an alkaline mouthwash. Vice versa, in case of an acid saliva, an acid mouthwash indicated.—R. F. L., St. Louis.

Our magazines become very torn and the doctor objects to the stiff binders. What should I use?

Very soft flexible leather binders can be purchased which are convenient to handle and still protect the contents. For the children get small picture books with linen covers that do not tear easily.

Can I use anything to prevent the sandarac from sticking to cork?

Try rubbing a little vaseline on the cork and neck of bottle.

What is the proper way to make out a prescription?

A prescription should contain the name, address, (sometimes age) of the patient, written at the top. At the upper left, the symbol *R* representing the word "recipe," (meaning take) is usually printed. The names and quantities of the ingredients (preferably in Latin) each occupying only one line is next written. Following the letter S. or Sig. the directions to patient should be written in full. Finally the doctor's signature, registry number and date.

February Meeting

OF

THE EDUCATIONAL AND EFFICIENCY SOCIETY FOR DENTAL ASSISTANTS,
FIRST DISTRICT, NEW YORK

The February meeting of the Educational and Efficiency Society for Dental Assistants, First District, New York, was held on Tuesday, February 13, 1923, 8 P. M., Academy of Medicine, 17 West 43rd Street, New York City.

Following the usual order of business and committee reports, Miss Helen Johnson, Chairman of the Class in Public Speaking and Parliamentary Procedure, gave an account of the work accomplished by the first group, and announced that the second class was being organized to meet for their first lesson on March 2nd.

Miss Campbell announced a meeting of the Class in Roentgenology for February 28th.

Miss Vanderbeek reported for the Class in Laboratory Technique, whose members have been doing gold casting, inlays and cast clasp removable bridges. Orthodontic models were to be taken up at the next meeting.

It was announced that the Annual Dinner of the Society would be held at the Hotel Commodore on Wednesday evening, May 9th, further details to be given later.

The program of the evening followed. Dr. F. L. Stanton presented a very interesting and instructive address entitled "If I Were a Dental Assistant." He enumerated the various qualifications necessary for the dental assistant to possess if she would be efficient in the performance of her duties. He stressed the proper use of the telephone in the dental office, so much of the business of the office being perforce transacted over the telephone, stating that many thousands of dollars can be lost to the practice by the careless, indifferent receiving of messages from patients or prospective patients. Dr. Stanton went into details relative to the secretarial duties of the assistant, and pointed out the value of correct accounting, illustrating his remarks by means of specially prepared charts as well as by books from his own office. He emphasized the benefits to be gained by the use of the adding machine and the noiseless typewriter, the elimination of all distressing noises being an advantage in the professional office. At the close of his talk Dr. Stanton demonstrated the uses of the various things shown. The society was indeed fortunate in having so able a speaker.

Miss Mary Miller, a member, read a very interesting paper entitled "Our Golden Opportunity," in which she emphasized the opportunity offered the dental assistant in becoming a member of a dental assistants'

society and taking part in the activities of such an organization. She spoke of the advantages gained by greater education and of the incentive of service well performed. She stressed the value of co-operation in the dental office for the successful conduct of the practice, and in conclusion said that the future held much in store for the loyal, conscientious, earnest dental assistant.

Miss Wiss reported on the Dinner-Dance which had been held in January, having proved a great success.

A number of prominent members of the dental profession of New York and New Jersey attended the meeting. Several applications for membership were presented by the chairman of the Executive Board for their first reading, and several new members were introduced to the society as having been elected to membership.

A cordial invitation is extended to all dental practitioners to attend the meetings of the society, and the interest of the dental assistant is solicited. Meetings are held the second Tuesday of the month at the Academy of Medicine.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

DENTIST (INDIAN SERVICE)

The receipt of applications will close on April 24. The examination is to fill vacancies in the Indian Service at large at an entrance salary of \$1500 a year, plus the increase of \$20 a month granted by Congress.

Incumbents in these positions will be allowed actual necessary traveling expenses, including sleeping-car fare, incidentals, and subsistence when actually employed on duty in the field. All dental supplies and instruments are furnished by the Government. Employees will have no fixed place of abode, but will be required to travel from school to school.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, and experience on a scale of 100.

Senior students in a dental college of recognized standing will be admitted to the examination on the condition that they furnish proof of actual graduation within six months from April 24.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or secretary of the board of U. S. civil service examiners at the post office or custom house in any city.

DIETETICS and HEALTH

Educating the Public

The following is the sixth of a series of "short stories" intended to inform the public of the possible results of dental ignorance or neglect, and to suggest the benefits which can be reasonably expected from intelligent dental treatment.

Any practitioner who wishes to have these stories published in his local newspaper is privileged to do so, but in all cases the author's name must accompany the article, and in no case must a local dentist be mentioned in any way in connection with the article. The design is to secure publicity for dentistry rather than for any individual practitioner.—EDITOR.

Why Harry Didn't "Pass"

L. W. Dunham, D.D.S., New York

Harry was backward—a good mind, but couldn't seem to keep up with others of his age. He was always ailing in some way. Mother said, "He needs a tonic." Finally Dad said, "First, let's find out the cause of his condition and then we'll get somewhere."

The doctor said his heart and lungs were all right, his kidneys were a shade off but "nothing serious." He had a bad stomach—but *why* the stomach?

At last the doctor casually inquired about his teeth. They all remembered that Harry had suffered with terrible toothaches a few months before, but he didn't want to go to a dentist and mother used "toothache drops" and nursed him along until the trouble stopped.

Doctor said, "Take him to a dentist." Of course it was found that the trouble only began when the decayed teeth stopped hurting—the nerves had died, abscesses formed, and poison was pumped into Harry's system constantly. The teeth were treated or extracted; some were filled and Harry's mouth made healthy. Result: Harry's stomach was well, he had more pep and in six months he caught up with the "bunch" and stood near the head of his class.

The Importance of Fruit in the Daily Diet

Since mankind has lost the sure instinct possessed by all wild creatures of choosing wholesome food, much ingenuity has been spent to reconstruct the lost knowledge. Naturally the regulation of the diet in health and disease has always attracted the interest of the physician and surgeon. Although no one can maintain that the problems involved have all been solved in a satisfactory or scientific manner, it must be considered gratifying, according to the *International Journal of Surgery*, that we have passed the stage when the flesh of the bull or lion was prescribed for the faint-hearted and the lamb for the violent. It is only comparatively recently that we have commenced to understand the profound influence exerted by faulty dieting.

We have learned of the dangers of carbohydrate starvation which leads to acidosis and coma, while on the other hand excessive indulgence in the consumption of sugar and starches sets up undesirable modifications in the bacterial flora of the intestinal tract producing excessive fermentation and putrefaction, not to mention the dangers of overweight and diabetes. Protein foods, meat in particular, have been regarded with suspicion since remote antiquity. The matter has even assumed religious importance in many instances. The taboo of the cow in India is a well-known example, while more or less strict religious vegetarianism exists even in our communities at the present time.

Modern scientific conceptions altogether favor a moderation in the use of proteins. To appreciate the profound change that has occurred in this respect, we must turn our attention to the feeding habits of the eighteenth and early nineteenth centuries. A study of diaries and other historical documents reveals that our forebears, at least the fashionable and well-to-do sections, indulged in astonishing and, to say the least, unappetizing feasts. We learn from the chronicles that a good King Louis of France considered the whole of one good-sized chicken but a small item of a regular dinner. In a London museum of pathological specimens we may behold the ruptured esophagus of a member of a noble guild. The tear, which we are informed was sustained at a public dinner, is occupied by a morsel of meat which would go far toward supplying the substance of an up-to-date dinner course.

It is a fact that such excesses were far from uncommon, and this is held to be an explanation of the infinitely greater prevalence of gout in the good old days. In addition, meat has been considered an etiologic factor in the causation of all varieties of rheumatic disorders, and physicians were emphatic in accordance with this conception in excluding such food from the diet of all sufferers. Similar restrictions have been practiced in affections of the kidney and liver.

Exact experimental studies and scientific observations undertaken in the immediate past have furnished a reliable basis for our dietetic arrangements. Today the pendulum is apparently swinging away from the sweeping conclusions in vogue until recently. The value of meat in moderate quantities is generally accepted by all advocates of the rational mixed diet. On the other hand, however, strict experiments have proved that an excess of proteins will induce kidney disturbances even in the healthy. It is therefore more than an empty superstition to regulate the consumption of meat and other protein foods and to insist on wise moderation.

It is matter of satisfaction therefore to learn that the consumption of fruit and vegetables is constantly increasing. For all authorities agree that vegetable proteins are less irritating and that our necessary quota of carbohydrates should be consumed in the form of starch and not of concentrated sugar. Those concerned with the physical welfare of the nation will follow with interest the active progress that is being made in opening up the wonderful resources of Florida.

This favored state has to thank her Spanish discoverers for more than the romantic and yet fitting name, for soon after the first occupation the conquerors introduced citrus fruits. It is common knowledge that grapefruit and oranges promise to make the state one of the most flourishing ones of the nation. We have every reason to applaud the far-sighted fruit growers who are ever increasing the acreage under cultivation.

Perhaps it is not too sanguine to hope that the popularization of knowledge concerning the value of fruit juices will gradually bring about a disappearance of the shameful "fruit flavor" substitutes that are being imbibed daily by millions of our citizens. One must wonder if they realize that they are drinking sweetened water colored with aniline dyes. The best that can be said about some of the popular concoctions is that they are not poisonous. It seems strange that the public and above all its health guardians can rest satisfied with the existing state of affairs when modern transit facilities have made the groves of Florida, so to speak, a suburban neighbor of the populous centers along the Atlantic seaboard.





EXTRACTIONS



No Literature can have a long continuance if not diversified with humor—ADDISON

A bas this winter! That means dammit, if anybody asks you.

(Friend—borrowing another book)—You don't have to blow the dust off that—I don't mind.

(Booklover—sadly)—I'm not—I'm kissing it good-by.

A boy had just been vaccinated and the doctor was about to bandage the place. "Put it on the other arm, doctor," he said. "Why, no," said the doctor, "I'll put it on the sore arm, of course, so that the boys at your school won't hit you on it." "Put it on the other arm, doctor," repeated the youngster. "You don't know the boys at our school."

(Teacher)—Jimmy, name one of the by-products of coal.

(Jimmy)—Clinkers!

The pessimist gazes toward the future and thinks what a rotten past it will make in time.

(Ted)—What was the barber so embarrassed about?

(Ned)—I went in one day and caught him shaving himself with a safety razor.

(Jimsen)—Digging wells is about the only business where you don't have to start at the bottom.

(Wilters)—Maybe so; but even that is a hard life, for you're at the bottom when you get through.

(Inquisitive young daughter)—Papa, what do you do all day long at the office?

(Father—not paying much attention to the question, as he is reading his paper)—Oh, nothing.

(Daughter)—Well, how do you know when you are through?

(Grandma)—Well, Beatrice, were you very brave at the dentist's?

(Beatrice)—Yes, grandma, I was.

(Grandma)—Well, here's that half dollar I promised you. Now tell me what the dentist did.

(Beatrice)—He pulled out two of Willie's teeth.

You can't beat the Scotch. Three sons of Scotia were arguing about how they could spend a pleasant Sunday evening. A card game was suggested by one, the movies by another, but the third man said going to church would be the most economical thing to do. They finally decided to go to church. When the collection was announced, the minister reminded the congregation that it was a special occasion and a dollar bill was the minimum amount that would be accepted. On hearing this one of the Scotchmen said: "Sandy, mon, save us, and be quick about it!" Sandy promptly fainted, and the other two carried him out of the church. Nothing slow about that.

A Chinese tailor followed the armies in the late war. The chaplain said to him one day: "John, do you know who God is?"

The Chinaman said: "Sure I do; I hear the soldiers talk about him to the mules."

(Magistrate)—Last time you were here I told you I never hoped to see you again.

(Delinquent)—Yes, sir, I know, sir—but I couldn't get the officer to believe me!

(Customer)—A package of razor blades, please.

(The Clerk—eager to please)—Sorry, we're all out of razor blades, but we have a special sale of nursing bottles today, sir.

A humorous correspondent inquires if we've ever seen these things:

A man bowing to the inevitable.

Anyone sitting in the lap of luxury.

A contingency in the act of looming.

An onus resting on anyone.

A public speaker weighing his words.

A hark on its way back.

A man answering the welkin when it rings.

Anyone capping a climax.

A man bearing a brunt, taking up cudgels or being hoist with his own petard.

FUTURE EVENTS

This year, THE NEW JERSEY STATE DENTAL SOCIETY will celebrate its 53rd birthday in a most fitting way. The meeting will be held in the Stacy-Trent Hotel, Trenton, N. J., April 11th, 12th, and 13th, 1923, and promises to be the very biggest and best meeting we ever had.

Our Essay Committee has succeeded in getting the following essayists:

Dr. W. E. Cummer, Toronto, Canada, "Partial Denture Service."

Dr. L. Pierce Anthony, Philadelphia, Pa., "Dietetics in Relation to Caries."

Dr. Harry Butler, U. S. Public Health Service, "Oral Hygiene."

Miss Anna Louise DePlanter, Philadelphia, Pa., "Recent Developments in Nutrition—Their Relation to the Dental Profession."

Dr. Arthur T. Little, St. Paul, Minn., "Occlusion."

The General Clinics are to be very broad in their scope, and will cover all interesting subjects.

The Entertainment Committee has made extensive plans for the entertainment of our guests—trips around historic Trenton, luncheons, etc., so do not neglect to bring Mrs. Wife—She'll enjoy her "vacation."

MATTHEW C. PEARCE,
Chairman Publicity Committee.

The Fifty-ninth Annual Meeting of THE MASSACHUSETTS DENTAL SOCIETY will be held at the Copley-Plaza Hotel, Boston, Mass., May 2, 3, 4, 1923.

The meeting will be conducted under four sections. Lectures and Teaching Clinics will be provided by each section. Lectures will be open. Admission to the teaching clinics will be by special tickets only.

Teaching clinics in Operative Section—T. W. Maves, D.D.S., University of Minnesota, Minn.; William Dwight Tracy, D.D.S., New York City, and others.

Teaching clinics in Prosthetic Section—M. M. House, D.D.S., Deaner Dental Institute, Kansas City, Mo.; W. E. Cummer, D.D.S., Royal College of Dental Surgeons, Toronto, Ont.

Teaching clinics in Oral Surgery Section—Arthur E. Smith, D.D.S., M.D., Chicago, Ill.; Clarence O. Simpson, M.D., D.D.S., St. Louis, Mo.

Teaching clinics in Preventive Dentistry Section—John Oppie McCall, A.B., D.D.S., Columbia University, N. Y.; Wallace Seccombe, F.A.C.D., Royal College of Dental Surgeons, Toronto, Ont.

For application to teaching clinics apply to the Secretary.

W. VERNON RYDER, *Secretary*,
175 Newbury St., Boston, Mass.

The third annual meeting of the DENTAL HYGIENISTS ASSOCIATION OF THE STATE OF NEW YORK will be held at the Hotel Commodore, New York City, Monday and Tuesday, May 7th and 8th, 1923. As the meeting of the

Dental Society of the State of New York is to be held on May 9th to 12th, it is hoped that ethical dentists and dental hygienists will attend both meetings. A cordial invitation is extended to all those who are interested in Oral Hygiene to attend the sessions on Tuesday, particularly the clinics which are planned to be unusually helpful.

The exhibits will be in charge of the Exhibit Committee, Frieda Baum, Chairman, 863 Melrose Avenue, New York City. Exhibitors are urged to secure space early.

PROGRAM

Monday, May 7, 1923, 9. A. M. Executive meeting. 10 A. M. Business meeting. Opening address by the president. 12.30 P. M. Informal luncheon. Short talks by Dental Hygienists. Afternoon and evening for amusement.

Tuesday, May 8, 1923, 9.30 A. M. Business meeting. Election of officers. 10.30 A. M. Open meeting. Short talks by well known people. 2 to 5 P. M. Clinics. 6.30 P. M. Dinner. Speakers.

MILDRED FARMER STAHL, *President*,
KATHERINE F. HOLLIS, *Secretary*.

THE IOWA STATE BOARD OF DENTAL EXAMINERS will meet for the purpose of examining candidates for a license to practise in Iowa, at Iowa City, College of Dentistry, beginning Monday, May 28th, 1923, at 9 A. M. An examination for Dental Hygienists will be given. For further information and application blanks, address,

DR. C. B. MILLER, *Secretary*,
726 Fleming Bldg., Des Moines, Iowa.

THE NORTH DAKOTA STATE DENTAL ASSOCIATION will hold its 18th Annual Meeting at Bismarck, No. Dak., on June 5th, 6th, and 7th, 1923. Headquarters are to be at the Hotel McKenzie, and the Convention will be held in the Masonic Temple. A cordial invitation is extended to all ethical practitioners.

C. D. PRICE, *Secretary*,
539 DeLendrecie Bldg., Fargo, N. D.

THE BOARD OF DENTAL EXAMINERS OF ALABAMA will meet Monday, June 18, 1923, at 9 o'clock A. M. at the Birmingham Dental College, Avenue F and 20th Street, Birmingham, Alabama, for the purpose of examining applicants who hold diplomas from reputable dental colleges for certificates of qualification to practise dentistry in Alabama.

All applications accompanied by the examination fee must be filed with the Secretary-Treasurer at least one week before the examination. For further information, application blanks, etc., address Dr. H. Clay Hassell, Secretary-Treasurer, 616 22nd Ave., Tuscaloosa, Ala.

THE MISSISSIPPI STATE BOARD OF DENTAL EXAMINERS will hold its next regular annual meeting in the new Capitol Building, Jackson, June 19th, 1923. Applications for Dentists' and Dental Hygienists' examinations should reach the Secretary ten days before the meeting. For further information and blanks, address

B. J. MARSHALL, *Secretary*,
6-7 Turner-Cox Bldg., Marks, Miss.

THE CONNECTICUT DENTAL COMMISSION will meet at Hartford, Connecticut on June 21st, 22nd and 23rd, to examine applicants for license to practise dentistry and dental hygiene, and to transact any other business proper to come before them. For further information apply to Arthur B. Holmes, 63 Bank Street, Waterbury, Connecticut.

THE WISCONSIN BOARD OF DENTAL EXAMINERS will hold an examination for dentists and dental hygienists on June 25, 26, 27, 28, 29, 1923, in Milwaukee, Wis. All applications to take these examinations must be made on blanks supplied by the Secretary, and should be filed at least fifteen days before the examination. For further information and blanks address

J. L. BLISH, D.D.S., *Secretary*,
Fond du Lac, Wis.

The next meeting of the OKLAHOMA STATE BOARD OF DENTAL EXAMINERS will be held at the State Capitol, Oklahoma City, Okla., June 26th to 30th, inclusive. For further information regarding requirements, etc., address Dr. L. M. Doss, Secretary, 245 American National Bank Building, Oklahoma City, Okla.



*Doesn't this picture suggest
a phase of your last vacation?
Write it up and send it in.*
